


PLANT DETECTIVES

On Your Knees!

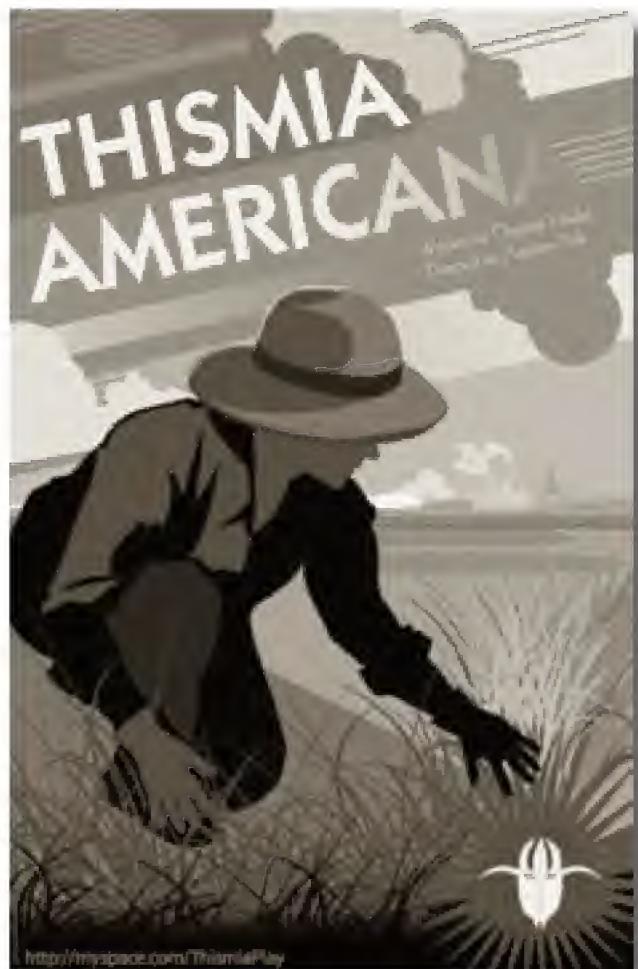
Become Famous! Join the Hunt! Be the One to Rediscover the Incredible Extinct *Thismia americana*! Sign Up Now!

These slogans advertised the first of seven large-scale searches for *Thismia americana* (banded trinity), "the most unique plant ever discovered in North America." Though they turned up enough hitherto unknown natives to justify founding the Chicago Wilderness Society—which includes northwest Indiana—none of the searchers found *Thismia*, so YOU STILL MAY BE THE ONE to rediscover it at the twentieth anniversary hunt this August.

Why all the sensationalism? *Thismia americana* was last seen in 1916 by its finder, University of Chicago graduate botany student Norma Pfeiffer, who had discovered it in 1912. This "small, bluish green August-blooming flower, barely projecting above the ground" first appeared in a "moist sedge prairie" near 119th and Torrence in Chicago and, later, in nearby sites. It was never found anywhere else on the planet. Because commercial development destroyed all sites, what made botanists think they could rediscover *Thismia*? Dr. Pfeiffer had recorded the associates: sweet flag (*Acorus calamus*), redtop (*Agrostis alba*), swamp milkweed (*Asclepias incarnata*), common boneset (*Eupatorium perfoliatum*), black-eyed Susan (*Rudbeckia hirta*), marsh club moss (*Selaginella apoda*), and late goldenrod (*Solidago gigantea*) as well as northern adder's tongue fern (*Ophioglossum vulgatum pseudopodum*), two true mosses, and a liverwort (*Riccia* sp.).

If YOU ARE THE ONE "stooping to the challenge," as a friend says, some pointers:

- Wear knee pads.
- Learn the plant. It's tiny, has six petals, three appearing to join like a basket handle, leaves and stalks below ground; you'd see about one-quarter inch above ground.
- Learn the associates; they inhabit quite a number of places in the NE Illinois and NW Indiana lake plain.
- Be alert. Botanist Ken Klick flings his car keys into a likely spot and doesn't leave until he finds them.
- Be imaginative. Gerould Wilhelm makes two intriguing suggestions: Because *Thismia* belongs to the Burmanniaceae, a family whose members, though nearly all tropical, inhabit very wet forest, it may show up on the hummocks of the Indiana Dunes National Lakeshore's swampy old growth forest. *Thismia*, a saprophyte, may



Playwright Chris Hodak of the Calumet Stewardship Initiative wrote a one-act play named for this rare and mysterious plant. It premiered in Chicago in September 2009.

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All are invited to submit articles, news items, and event postings of interest to our membership. Acceptance for publication is at the discretion of the editor. INPAWS welcomes opposing viewpoints.

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To promote the appreciation, preservation, conservation, utilization and scientific study of the flora native to Indiana and to educate the public about the value, beauty, diversity, and environmental importance of indigenous vegetation.

Membership

INPAWS is a not-for-profit 501(c)(3) organization open to the public. For membership information, visit www.inpaws.org.

News and Views

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PRESIDENT'S MESSAGE

The Tallamy Tour!

Probably the best spokesperson today for the importance of native plants is Dr. Douglas Tallamy, University of Delaware entomologist and author of *Bringing Nature Home: How You Can Sustain Wildlife with Native Plants*. I have had the privilege of hearing him speak several times, and have mentioned him in previous columns.

His message that native plants are the cornerstone of the food chain for wildlife drives home the point that we can't let our natural areas be overrun by exotic invasives, which don't serve the same function. And his complementary message that we can help wildlife by planting natives in our own backyards is both positive and empowering. I still recall with amazement the sight in 2009 of 1,200 enthusiastic people coming out on a weekday night to Butler University to listen to an entomologist talk about native plants. Who could have imagined it!

So I'm happy to announce that INPAWS is sponsoring a return of Dr. Tallamy to Indiana in 2011, not for just one presentation, but for three. He returns to Clowes Hall on September 13 with a brand new presentation expanding on his message of planting natives to help wildlife. He then travels to Fort Wayne on September 14 and to South Bend on September 15, delivering his message to audiences in those cities. As a bonus, Dr. Tallamy will also appear in Evansville on November 8 at a non-INPAWS event.

If you have not yet had the opportunity to hear Dr. Tallamy speak, or even if you have, don't miss attending one of these appearances. You will receive more specific information on the INPAWS-sponsored events, both by mail and email, as we get closer to the dates. We will also post the Evansville event on our website in the events calendar.

—Tom Hohman



INPAWS PARTNERS

Indiana Academy of Science

Committed to promoting Indiana science and science research, the Indiana Academy of Science has a remarkable history of 125 years of excellence. Indiana ornithologist Amos W. Butler, frustrated by unsuccessful efforts to obtain information from and mingle with other scientists in the state, organized the Brookville (Indiana) Society of Natural History, which in turn took the initiative to form a state society, hence Brookville's fame as the "birthplace of the Indiana Academy of Science."

The first meeting of the Society was held December 29, 1885, in the Marion County Courthouse, Indianapolis. The organizers were of high professional stature, which ensured that the organization would be respected, and the Society continues to attract outstanding members many of whom are nationally and internationally known.

The IAS Annual Meeting brings together hundreds of Indiana's premier scientists, science educators, and undergraduate and graduate students representing the fields of anthropology, botany, cell biology, chemistry, earth science, ecology, engineering, entomology, environmental quality, history of science, mathematics, microbiology and molecular biology, physics and astronomy, plant systematics and biodiversity, psychology, science education, and zoology. Participants have the opportunity to dialog and share their research with colleagues throughout Indiana and the Midwest.

The IAS awards Senior Research Grants of up to \$3000 to Academy members or students they sponsor to purchase supplies, support travel and field expenses, pay research assistants, and provide other items required to conduct innovative scientific research. The Winona Welch Award supports biodiversity research (e.g., surveys and systematics) of plants and their allies (e.g., algae and fungi); one award of \$400 is made each year for worthy proposals.

INPAWS members know IAS for publishing excellent reference works on the flora and fauna of our state, including *Orchids of Indiana* (Homoya), *Reptiles and Amphibians of Indiana* (Minton), *Dragonflies of Indiana* (Curry), *Mammals of Indiana* (Whitaker et al.), and *Mosses of Indiana* (Welch). Find these and other titles at <http://indianaacademyofscience.org>.



Thismia americana illustration by Mark Mohlenbrock, from the 2004 issue of Chicago Wilderness Magazine, chicagowilderness.org.

Thismia americana

continued from page 1

be hiding underground or even living its whole life there like its orchid cousin, western Australian underground orchid (*Rhizanthella gardneri*), known from being turned up rarely by the plow.

HAVE HOPE! *Thismia* authority Linda Wetstein notes that a native lichen found near Cincinnati in 1849 showed up 200 miles away in southern Illinois in 1978.

—Barbara Plampin, Shirley Heinze Land Trust

For more info about the August 13, 2011, *Thismia* hunt and to register (required for participation), please visit <http://tinyurl.com/thismiahunt>. The Shirley Heinze Land Trust is a sponsor. Indiana sites include Seidner Dune and Swale, Dupont Dune and Swale, and Ivanhoe, all in Lake County.

Suggested Reading

The entries on *Thismia americana* and *Ophioglossum vulgatum pseudopodium* in Swink, F. and G. Wilhelm, *Plants of the Chicago Region*. Fourth Edition. Indiana Academy of Science, 1994.

One can find out a lot about *Thismia* spp. online.

One Classy

My husband and I both grew up in cities, so ever since we bought a rural piece of land in Owen County in 1992, we've had questions. Questions like:

Is mowing the wildflower meadow as good as a burn? When should I mow?

Is that a shagbark or a pignut hickory?

If a beaver takes out a few saplings, does that do any harm? How many is a few? When is it time to call the trapper?

Should we thin out the understory in the woods (take out those 1-inch diameter trees and saplings)? This is assuming the beaver doesn't get them first.

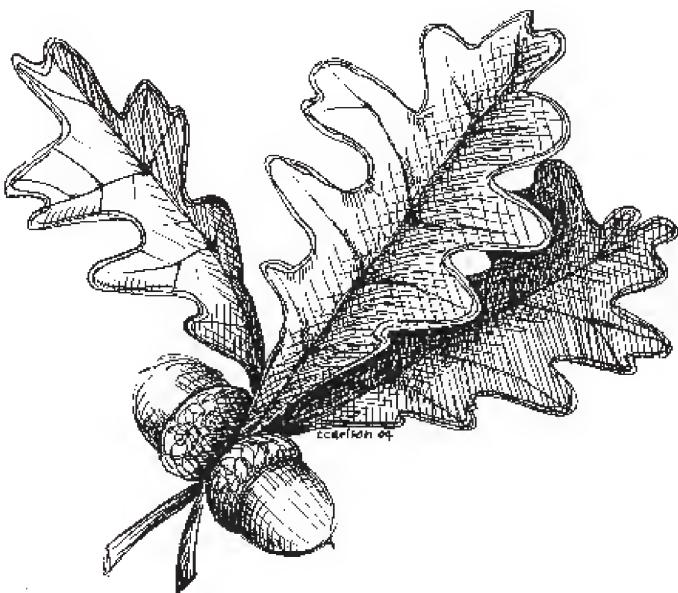
Why don't we hear bobwhite like we used to?

Should I cut out the multi-flora rose?...or use an herbicide?...or just let it go, hoping disease gets it?

How soon does the woodcock come back?

Will the bulrush in the wet meadow become invasive?

I considered hiring a consultant to walk our land with us, to identify species and tell us what we needed to do to keep our woods, pond, and meadow in the best ecological condition. Then I found out there was a state program that would do exactly that, and for free! It's Indiana's Classified Forest and Wildlife Habitat Program.



The Classified Forest Program was started by the Indiana legislature in 1921 to slow down the degradation of the state's forests due to indiscriminate burning and grazing. Indiana was,

Forest/Wildlife Program

and still is, world-famous for its hard-woods (walnuts, cherry, and oak). Bloomington was once the furniture capital of the world. The program began as an attempt to preserve the quality of Indiana's timber, but it expanded in 2006 when the Indiana Classified Wildlife Habitat program was folded into it. If you join the program today, you are assured of help not only to keep your woods and trees healthy but also to make your land excellent habitat for native plants and wildlife.

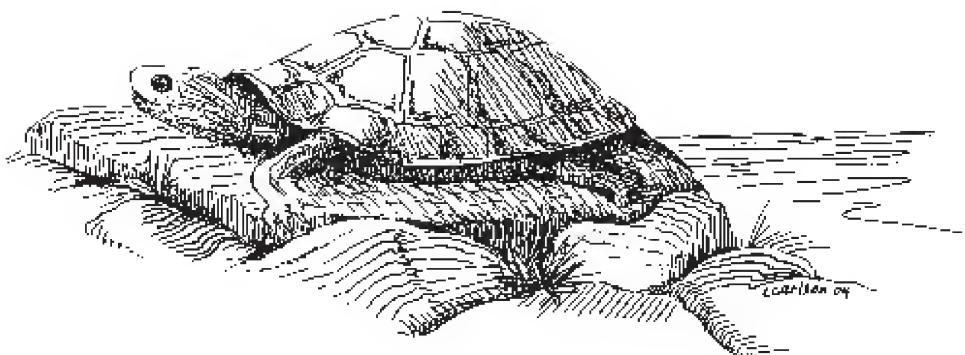
Ralph Universaw is the district forester for Owen and Monroe counties and enrolls people from those two counties in the program. On the advice of a fellow INPAWS member, I called him. Did joining the program involve giving up property rights? (No.) Was it just for people who would someday harvest their woods? (Definitely not.) Was it expensive to join? (No. You pay for a one-time surveyor's report, but the program is free and your property taxes are reduced every year as a result.)

The only requirements for being in the program, Ralph explained, are that you have a minimum of ten acres (it can be woods or open land) and agree to not burn or graze livestock on your land. That's it. I have no intention of doing either of those, I told him, but neither do I ever intend to harvest, or cut our trees for sale. I'm not managing our land to produce great timber, I'm managing it for the conservation of native plants and wildlife. I still qualify, Ralph assured me.

I met Ralph one day last August to walk our land. Every district forester will do this, and there is no commitment to join the program.

Ralph identified trees, pointing out white oaks (they seemed to be his favorites) and suggesting ways I could promote their growth. He told me, to my surprise, that one forested ravine on our property was used as crop land a hundred years ago. He said our spring was healthy, and he was glad to see us using it for our water. I asked him why the hundreds of pawpaws we have on our land did not produce fruit last year. He said that because of last spring's odd weather, the pollinating carrion flies were not around when the pawpaw flowers were in bloom. When I asked him about bobwhite quail, he said that replacing fescue (which clumps too much) with warm season grasses would encourage their nesting. He also told me that last summer's severe drought caused rivers and creeks to get so low that beavers sought out more permanent bodies of water. That's why the beaver is back in our pond.

I asked every question I could think of about our land and its care. We discussed the autumn olive and Japanese honeysuckle and plans to eradicate them. He told me we didn't have Tree



of Heaven and we had some grapevines in the woods, but not enough to worry about.

Ralph gave us a written stewardship plan (ours was 17 pages) that included an analysis of our soil types, a land use history, historic features, wildlife attributes, a list of native plants and shrubs that are most likely on our property, an invasives management plan, and regional conservation concerns (development pressures that may impact native plant corridors). There was information on our trees and timber potential, which we will use only as it relates to promoting a healthy, mature woods.

We decided to join the program. We procured a survey report (Ralph gave us a list of local surveyors) and sent in our application. Every step of the way, Ralph was extremely helpful. By joining the program before February 28, we ensured that our land will be assessed at \$1 an acre, excluding any buildings, from 2011 forward.

This is, as far as I can see, a win-win agreement between the Division of Forestry and us. We have the same goal. My husband and I want to ensure that our trees and shrubs are robust, the native ferns, grasses, and wildflowers thrive, the pond is healthy, the invasives are controlled, and the wildlife flourishes—in short, we want to be the best stewards possible of our 42 acres in Owen County. So, it turns out, does the state of Indiana.

For information on Indiana's Classified Forest and Wildlife Habitat Program, contact your district forester through the Indiana Division of Forestry, private lands management.

Illustrations by Chris Carlson from R.A. Ingraham, *Swimming with Frogs*.

Go Green, Grow Native

Despite growing recognition that exotic invasive plants are degrading our nation's natural areas, an estimated 82 percent of invasive shrub species—like Asian bush honeysuckle, privet, and burning bush—still come from landscape plantings. In Monroe County, Indiana, a local group of concerned citizens and organizations, is working to change that.

Called MC-IRIS (Monroe County – Identify and Reduce Invasive Species), the group is initiating a project called "Go Green, Grow Native" designed to decrease the number of invasive plants and increase

the number of native plants sold in their county.

Through contacts by MC-IRIS members, local plant retailers are being encouraged to stop selling invasive plants that are on the IPSAWG (Invasive Plant Species Assessment Working Group) list and to sell more native species. If the retailer sells native plants and agrees to stop selling the species on the IPSAWG list, they are added to INPAWS's "Nurseries and Landscape Designers Providing Plants Native to Indiana" list. Found online at www.inpaws.org, this list is widely used by

those looking for native plants for sale in Indiana and averages over 300 hits every month. Participating sellers will also be recognized in *INPAWS Journal* and in a *Bloomington Herald Times* editorial.

To encourage participating retailers to sell more native species and increase customer's attention to native plants in their stores, MC-IRIS is providing free "Go Green, Grow Native" plant markers, bench tape, signs, or stickers for their displays of native plants. In response to their proposal, INPAWS Council has granted \$2,000 to the project for the purchase of these marketing materials. Information on invasive plant species and non-invasive alternatives will also be provided.

So far seven Monroe County retailers have shown interest in participating. This first year is intended as a small-scale demon-



RETAILERS' "DO NOT SELL" LIST

	Common Name	Latin Name
FORBS	crown vetch	<i>Coronilla varia</i>
	dame's rocket	<i>Hesperis matronalis</i>
	Korean lespedeza	<i>Kummerowia stipulacea</i>
	striate lespedeza	<i>Kummerowia striata</i>
	white sweet clover	<i>Melilotus alba</i>
	yellow sweet clover	<i>Melilotus officinalis</i>
GRASSES	Japanese knotweed	<i>Polygonum cuspidatum</i>
	miscanthus hybrid	<i>Micscanthus x gigantea</i>
	Chinese maiden grass	<i>Miscanthus sinensis</i>
	reed canarygrass, ribbon grass	<i>Phalaris arundinacea</i>
SHRUBS	common reed	<i>Phragmites australis</i>
	tall fescue	<i>Schedonorus arundinaceus</i>
	Japanese barberry	<i>Berberis thunbergii</i>
	Russian olive	<i>Elaeagnus angustifolia</i>
	autumn olive	<i>Elaeagnus umbellata</i>
	burning bush	<i>Euonymus alatus</i>
	glossy buckthorn	<i>Frangula alnus</i>
	bicolor lespedeza	<i>Lespedeza bicolor</i>
	sericea lespedeza	<i>Lespedeza cuneata</i>
	Amur privet	<i>Ligustrum amurense</i>
TREES	blunt leaved privet	<i>Ligustrum obtusifolium</i>
	California privet	<i>Ligustrum ovalifolium</i>
	Chinese privet	<i>Ligustrum sinense</i>
	common privet	<i>Ligustrum vulgare</i>
	Amur honeysuckle	<i>Lonicera maackii</i>
	Morrow's honeysuckle	<i>Lonicera morrowii</i>
	Tatarian honeysuckle	<i>Lonicera tatarica</i>
	Bell's honeysuckle	<i>Lonicera x bella</i>
	common buckthorn	<i>Rhamnus cathartica</i>
	Norway maple	<i>Acer platanoides</i>
VINES	sawtooth oak	<i>Quercus acutissima</i>
	Siberian elm	<i>Ulmus pumila</i>
	Asian bittersweet	<i>Celastrus orbiculatus</i>
	wintercreeper	<i>Euonymus fortunei</i>
	English ivy	<i>Hedera helix</i>
	Japanese hops	<i>Humulus japonicus</i>
	Japanese honeysuckle	<i>Lonicera japonica</i>
	periwinkle	<i>Vinca minor</i>

IPSAWG list of invasive plants. Retailers who agree to not sell these species (or any of their cultivars) will be added to the INPAWS list of "Nurseries and Landscape Designers Providing Plants Native to Indiana."

stration project enabling MC-IRIS to learn which marketing materials are most effective for retailers and which obstacles keep retailers from participating. Information learned during this first year will be used to expand the project to more retailers in Monroe County, and if successful, to expand the project state-wide. MC-IRIS is hoping the project will decrease new sources of invasive landscaping species throughout Monroe County and increase recognition of the positive benefits associated with native plantings.

MC-IRIS partners include The Nature Conservancy, City of Bloomington Parks and Recreation, EcoLogic LLC, Monroe County Soil and Water Conservation District, Monroe County Extension, Monroe County Parks, Sycamore Land Trust, and the Department of Natural Resources' Divisions of Forestry and State Parks and Reservoirs. MC-IRIS is a local affiliate of the Southern Indiana Cooperative Weed Management Area. For more information, visit MC-IRIS.org.



INPAWS Awards to Landscape Architects

Intrepid historian Ruth Ann Ingraham could unearth from INPAWS documents only a partial history of INPAWS Awards presented at INASLA. If you know of others, please let her know.

1999

To Clare Bennett Associates for their use of native plants in the Cardinal Greenway Project near Muncie

To Jan Tellstrom to recognize his installation of native plants at the Smock Golf Course

2000

To Ratio Architects for the native plant garden at Future Farmers of America's national headquarters, Indianapolis

2001

To Schmidt Associates for the prairie labyrinth garden in a Hamilton County Park

2004

To Ratio Architects for creativity and imagination in the design of the Indiana State Museum's Eastside Gardens

2005

To Kevin K. Parsons & Associates in cooperation with Indiana Department of Nature Resources for phase 1 of the Prophetstown State Park project

2006

To Williams Creek Consulting for their "Grandview Gardens Stormwater Best Management Practice"

2010

To Kevin K. Parsons & Associates for the Sustainable Garden at Eli Lilly and Company



Eli Lilly & Company's

For more than ten years, INPAWS has been recognizing the work of professional landscape architects who use native plants in their designs. The INPAWS Award is given at the annual fall conference of the American Society of Landscape Architects, Indiana Chapter. This is the story behind the design that won the 2010 INPAWS Award.

INASLA member Kevin K. Parsons & Associates provided site planning, design concepts, the physical design and layout, and garden construction documentation for a new kind of urban garden on a commercial property. The client: Eli Lilly and Company. The objective: enhance the campus front door and its interface with the community, setting an example for further urban greening, and allow for the educational opportunities of native, green, and sustainable practices.

The landscape architect teamed with an engineering consultant as the garden designer to realize the client's ambition of a natural, sustainable garden that would offer a friendly, beautiful alternative to the normal urban landscape at the corporation's front door. Once Lilly approved the concept plan, the project was designed and ready for bid within a 35 day schedule, creating an intense and complex orchestration of decisions, plant selections, site design issues, and City approvals and permits. This was considered the first phase of the project, with additional phases planned in the near

future to complete the garden as an entire city block.

The landscape architect conceived the Sustainable Garden as representing and helping to identify the native Indiana landscape. He specified the exclusive planting of native Indiana plants, the use of recycled and indigenous materials, permeable pavement surfaces, and solar powered paver and bollard lights. The site was also conceived to retain, naturally treat, and return stormwater into the ground, with a goal of net zero runoff into the City's combined sewer overflow system.

Using portions of a city block comprising former commercial and industrial sites with substantial impervious surfaces, the consolidated 3.7-acre site was cleaned of hard surfaces, debris, and contamination. Soil reclamation and rehabilitation included blending the existing and limited new topsoils with native hardwood bark mulch and organic compost to create a friable and nutrient-rich medium with improved drainage. No man-made chemicals were specified or used.



Sustainable Garden

The garden layout was based on an organic cellular-molecular form emulating the simple cone (disk) and petals (rays) of a flower. The pedestrian paths grew from the stem (midrib or rachis) of a leaf that organized the pedestrian circulation from the central cone of the flower to the street edge. Artistic license allowed this blend of flower and leaf.

The flower "petals" were planted with native plants throughout, and the petal edges allowed for narrow maintenance and access paths. The edges were also planted with native trees and shrubs to reinforce the separation. The original concept divided the site into native plant habitat zones, including meadows, woodlands, dry and wet prairies, a savanna, and designated rain gardens.

Over 33,000 native plants of 138 different species were specified for the garden. Nineteen of the plant species are also considered medicinal by the Indiana Medical History Museum. The plantings include 26,000 forbs and wildflowers, 7,000 grasses and groundcovers, 151 shrubs, 98 trees, and 88 ferns. The majority of the plants were plugs grown from local seed sources, with the trees and shrubs specified as locally grown in root-stimulated containers. *Phlox subulata*, not

a true Indiana native (although it is stated to be native in Michigan and Ohio), was used at the edge of the garden as a transitional planting representing the urban non-native environment interfacing with the all-native garden.

Implementation of the massive native plantings was provided by over 500 Lilly employee volunteers on their annual day of service in May 2009. Plant procurement and organization of the volunteers was managed by Keep Indianapolis Beautiful, Inc. in conjunction with the corporate-wide day of service throughout Indianapolis and many other locations.

Judges considered this garden worthy of the INPAWS Award because of its exclusive use of native plants in quantity, the concept of establishing native plant habitat zones, the unique symbolic design and layout, the use and integration of recycled and indigenous materials, the use of permeable pavements, and the rehabilitation and reuse of urban lots, all as directed by a responsible corporate citizen. This truly sustainable garden will complete its three-year period of establishment in May 2012 and showcase Indiana native landscapes for years to come.

Photographs by Kevin Parsons. Wild quinine and butterfly weed are shown blooming in July 2010, a year after planting. Find the full color concept plan and additional photographs at inpaws.org.



A reclaimed city block planted to Indiana natives graces the front door of a major corporation, enhancing its interface with the neighborhood.

Successful Biodiversity Survey at Goose Pond Fish and Wildlife Area

Barbara Simpson, Friends of Goose Pond; Daryl R. Karns, Hanover College; Donald Ruch, Ball State University; and Brad Feaster, Indiana Department of Natural Resources



The first biodiversity survey of Goose Pond Fish and Wildlife Area (FWA), an 8000-acre wetland restoration located south of Linton in southwestern Indiana, was conducted July 16-17, 2010.

This first step in assessing an important Indiana wetland was intended to provide baseline biodiversity information and lay the groundwork for future studies.

The call for taxonomic experts in the March and June Indiana Academy of Science newsletters received an overwhelming response, with 98 scientists, naturalists, students, and others volunteering their time and expertise to make the event a robust success.

Institutions and agencies represented at Goose Pond included the Indiana Department of Natural Resources, Indiana State University, Indiana University, Purdue University, Indiana University-Purdue University at Indianapolis, Ball State University, Hanover College, University of Evansville, Amos W. Butler and Sassafras Audubon Societies, Hoosier Herpetological Society, and JFNew Company.

Thanks to generous support from The Indiana Academy of Science (IAS), the Rivers Institute at Hanover College,

the Friends of Goose Pond, Amos W. Butler Audubon Society of Indianapolis, and the Greene County Soil and Water Conservation District, lodging and food were provided at no cost to participants. In addition, the IAS sponsored an Amphibian and Reptile Workshop for 19 educators and naturalists.

Taxonomic team leaders were identified and recruited their respective teams. The 15 taxonomic teams and their leaders were:

Amphibians & reptiles: **Daryl Karns**

Bees: **Robert Jean**

Beetles & other insects: **Jeff Holland**

Biogeochemistry: **Lenore Tedesco**

Birds: **Lee Sterrenburg**

Butterflies: **Don Gorney**

Dragonflies & damselflies: **Amanda Bellian**

Fish & mussels: **Brant Fisher**

Fungi: **Don Ruch**

Macroinvertebrates & plankton: **Bill Jones**

Mammals: **John Whittaker**

Marsh flies: **Bill Murphy**

Moths: **Megan McCarty**

Non-vascular plants: **Bill McKnight**

Vascular plants: **Scott Namestnik**

Scientists, naturalists, students, and volunteers assembled at Goose Pond during a hot July weekend and spent hours in the field identifying and cataloguing the spectrum of plant and animal life. The event produced an incredible amount of information in a brief snapshot of time, and also provided opportunities for participants to meet one another, share results informally, and enjoy the collegiality. A group dinner was held the first evening and teams reported their early results, highlighting finds of particular interest.

At the final day wrap-up session, teams reported their preliminary summaries. Species counts reported thus far include 20 species of amphibians and reptiles, 70–80 species of beetles, 37 bee species, 124 bird species, 48 butterfly species, 30 species of dragonflies and damselflies, 74 moth species identified with 6 more to be identified, 4 species of marsh flies, 4 fungi and 1 fungal associate, and 379 vascular plant species. When all teams have reported their final results, the total count will likely be over 870 species.

The teams all agreed that spending just two days in July only scratched the surface; painting a complete picture of the biodiversity to be found at Goose Pond FWA would require long-term seasonal surveys. But even with this brief look, the results show the richness and value of this developing wetland restoration. Highlight species reported included the purple fringeless orchid, American ruby spot dragonfly, bog lemming, and barn owl. Of the 30 species of dragonflies and damselflies, 13 were new Greene County records.

The plant team reported 123 probable county records. Of particular interest to the plant team was the diversity of wetland plants that were present through natural recruitment, since no wetland vegetation was planted at the beginning of the restoration. The butterfly and moth team reported 59 moth county records. The amphibian and reptile team saw many turtle nests and found five species of turtles.

A team from IUPUI Center for Earth and Environmental Science added a biogeochemistry survey to the mix. The group

studied a series of sites established in 2006 to assess carbon sequestration and wetland soil development in the wetland complex. Sites were initially selected to document the effects of different depth and duration of flooding as well as restoration age, with sites in both Beehunter and Goose Pond. The team reoccupied all six sites and repeated the sampling. Results are not yet available but they did find that up to 4-6 inches of organic muck had already accumulated in some areas showing rapid development of wetland soils.

There was general consensus that repeating this study of biodiversity in approximately 5 years during the same time period would be useful in assessing the progression of the restoration. To assess the development of the plant communities, a 10-year time frame was recommended. To continue to build upon

the inventory of plants and animals begun with this study, another biodiversity study in a different season would be of benefit, recognizing that some early season species were undoubtedly missed. The large scale and habitat diversity, 8000 acres of wetlands, prairie, open water, and bottomland tree plantings, offer opportunities for a wide range of research projects.

Goose Pond FWA is Indiana's largest wetland restoration done under the Natural Resources Conservation Service (NRCS) Wetlands Reserve Program (WRP), United States Department of Agriculture (USDA), and the 7th largest in the United States. The restoration covers 7138 acres in two sections, Goose Pond (5945 acres) and Beehunter Marsh (1193 acres) that are both part of Goose Pond FWA, Indiana Department of Natural Resources. The diverse habitats include 4000 acres of

shallow open water, 400 acres of bottomland tree plantings, and 1380 acres of tall- and short-grass prairies. The NRCS and IDNR have limited resources for gathering baseline data and monitoring the development of the restoration. They rely on volunteers contributing to studies such as this to gather data that assist them in the conservation and management of Indiana's public natural areas.

This article is adapted from a recent IAS newsletter. To learn more about Goose Pond FWA, visit <http://www.in.gov/dnr/fishwild/3094.htm> or Friends of Goose Pond at <http://friendsofgoosepond.org>. Species lists for each taxonomic group and a brief summary of results are posted at <http://indianaacademyofscience.org>.

◀ Vicky Meretsky of the hepatology team. Photo by P. Hoernig.

INVASIVES

Japanese Chaff Flower (*Achyranthes japonica*)

Chris Evans, River to River Cooperative Weed Management Area

A new exotic species has been found in southern Illinois. Japanese chaff flower, *Achyranthes japonica* (Amaranthaceae), is a perennial herbaceous plant that is native to Eastern Asia. It was first found in the United States in eastern Kentucky in the early 1980s and has quickly spread along the Ohio River and tributaries. It is currently found in seven states—Alabama, Illinois, Indiana, Kentucky, Ohio, and Tennessee.

Japanese chaff flower is easy to identify. Plants can be up to 2 meters tall, especially in sunny areas. The leaves are opposite, simple, and entire along the margins. The flowers occur on erect spikes at the end of the stems and upper branches. Flowers are small, lack petals, and occur in a tight cluster at the end of the spike. The flowers diverge at nearly a right angle from the spike, giving the flowers a somewhat bottle-brush look. When the fruits are formed, the spikes elongate greatly and the fruits lie flat against the spike. Each



fruit has a pair of stiff bracts that aid the fruit in attaching to clothes or fur.

Japanese chaff flower seems to grow best in areas with partial sun and moist soils, but it can also grow in heavily shaded and drier environments. Dense infestations have been found in bottomland forests, riverbanks, field edges, and ditches. This plant can produce an abundance of seed that is easily transported by sticking to shoes, clothing, or animal fur via the stiff, recurved bracts. If you plan on hiking in

areas where this plant is present, please be sure to thoroughly clean all seeds off of your clothing and pet's hair.

If you find any infestations of Japanese chaff flower in Illinois, please contact Chris Evans at 618-998-5920 or rivertoriver@gmail.com. In Indiana, contact Ellen Jacquart at 317-951-8818 or ejacquart@tnc.org.

Pernicious Periwinkle

Periwinkle (*Vinca minor*), also known as myrtle or vinca, is a favorite vining ground cover for residential and commercial use and is sold by both large and small nurseries and garden centers. Many buyers are attracted to the plant's periwinkle blue or lavender flower with a white, star-shaped throat that blooms in April and May.

A less commonly known name for periwinkle is "flower of death." It was called this in European folklore because its vines were woven into headbands worn by dead children or by criminals on their way to execution. Unfortunately, it may deserve the same name in North America, as the extensive mats it forms on forest floors can choke out native wildflowers and other plants. A visit to Yellowwood State Forest proves the point.

Unlike another common vining invasive groundcover, wintercreeper (*Euonymus fortunei*), periwinkle does not climb tree trunks, fences, and walls but remains on the ground where it reproduces through underground runners or stems above ground that form roots where nodes touch the ground. Periwinkle forms dense, extensive carpets on the forest floor and may cover huge areas (acres), smothering native wildflowers and other herbaceous or woody species. It grows vigorously and can thrive in complete shade and even poor soil.

European settlers brought this plant with them in the 1700s. They could not have imagined the negative effect this plant would have on our natural environment once it escaped from cultivation. Our predecessors left that problem to us.

Former owners of my Brown County cabin on Lawson Ridge Road apparently introduced periwinkle in a perennial bed. I have been digging and pulling periwinkle from that bed and surrounding areas for twenty years. When I think I've eliminated it and let a year or so go by without checking the location, I find it there again, spreading into the woodland at the edge of the garden. Last fall I found a patch where I had not seen it before, possibly started from the plant's inconspicuous and uncommon bean-like fruit. I'll continue working to eliminate it.



Control methods vary according to the scope of the problem. In my case, periwinkle is not out of control yet and I will continue to dig and pull manually. With large areas, the plant can be cut or mowed followed by a foliar application of glyphosate applied to new sprouts. There is more information at bcnwp.org with multiple, excellent links to the topic both generally and specifically.

It's easy to identify some of our non-native invasive plant species in winter time. Periwinkle is evergreen and so are many others, such as wintercreeper, English ivy, and Japanese honeysuckle. In late March and early April, watch for shrubs that leaf out earlier than our beloved native understory shrub, spicebush. Bush honeysuckles and autumn olive are two examples.

What are some alternatives to non-native groundcovers? Native alternatives are the vine Virginia creeper, *Parthenocissus quinquefolia*; Christmas fern, *Polystichum acrostichoides*; and wild ginger, *Asarum canadense*. Hellebores may serve the need as a non-native, non-vining, evergreen alternative. Some of these appear naturally just where you want them or may

be transplanted from other locations on your own property. Ask your neighbors and friends if they have some and are willing to share.

As always, I ask that you learn to identify noxious species that threaten to permanently alter our natural environment—both woodlands and open fields—and to control those invasive species with as much vigor as possible. I also urge you to ask local vendors to discontinue the sale of plants such as periwinkle and wintercreeper that threaten the viability of the wildlife habitats we love.

As chair of the Brown County Native Woodlands Project, Ruth Ann Ingraham writes a series about non-native invasive plant species for the Brown County Democrat. Learn more about the Brown County Native Woodlands Project at bcnwp.org.

Lesser periwinkle illustration courtesy of chestofbooks.com.

What To Do About Invasives???

Although invasive species are bad news, there are things you can do to lessen the impact of invasive species in our landscapes. A few ideas:

- **Don't plant them!** A number of highly invasive plant species are used in landscaping—convince your friends and neighbors to stop planting them. A great new resource is available at http://inpaws.org/IPSAWG_InvasivePlantPhotos.html.
- **Don't move them!** Remember that people are primarily responsible for moving invasive species from one place to another. Don't make it easy for invasives to hitch a ride. Clean your boots, your vehicle or ATV, your boat and trailer, and anything else that could carry invasive species propagules from one place to another.
- **Report them!** For those of you in the southern part of the state, become a Weed Watcher in the Southern Indiana Cooperative Weed Management Area's new Early Detection project and report invasive plants on their list. For more information, and to become a Weed Watcher, contact Eric Eubank with SICWMA at eeubank@dnr.in.gov.
- **Become active in a CWMA!** Cooperative Weed Management Areas are now in place over much of the state. These grassroot groups are the front line warriors against invasive plants and a great way to get involved locally.

Thanks to all of you actively working to decrease the impacts of invasive species in Indiana!

—Ellen Jacquart, INPAWS Invasives Education

Welcome, New INPAWS Members!

CENTRAL

Amanda Balay
Carolyn Barron
Constance Fortner
Ann Foster
Kay Hallen
Phoebe Koch
Deborah Marchand
Mike & Rosemary McGarragh
Debbie Miller
Marilyn & Richard Moudock
Sherryl Osgatharp
Shevy Parasivam
Kristen Perry
Linda S. Powell
Chuck Price
Patrick Savage
Rhonda Schenk
Lori Schutz & Patrick Rettle
Kimberly J. Winterheimer

NORTHEAST

Don Fleming
Roberta Smith

SOUTH CENTRAL

Scot, Deb & Claire Parrmele
Eleanor Savage
Helen Steussy

WEST CENTRAL

Michelle Arfman
James A. Keith
Pennie Lombard
Jane Magary
Steve & Debbie Taylor
Tom Virgin

OTHER

Anne Statham & Michael Zupan

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Kelsey Behl
Michael & Judy Below
John & Bonnie Bittner
Nikki Breidenbaugh
Colleen Butler & Louis Mestichelli
Anne Butsch
Carla Corbin
Frank & Barbara Dye
Kathy & Allen Eicher
Rick & LaVerne Erhardt
Sharon Ernst
Holly Faust
Ronda Fischer
Beverly Fish
Patty Fowler
Lois Gray
Sue Gregg
Karen Griggs
Adam Hape
Grant & Jean Hartman
Barbara A. Heikens
Crystal Heitzmaan
Susan Hunding
Robert & Susan Kluger
Harry Kuhn
James & Mel Ladato
Karen LaMere
Debra Lloyd
Pam Locker
Maureen O'Hern
Vicky St. Myers
Ryan Templeton
Mark & Kim Weldon
John O. Whitaker, Jr.

FIELD NOTES

Knobstone Trail Guide Debuts

"An engaging and comprehensive guide to one of the most revered hiking trails in America," is how Indiana University Press describes its new book about Indiana's longest footpath, a spectacularly rugged, 58-mile trek through 40,000 acres of forested land in southern Indiana.

A Guide to the Knobstone Trail presents first-person hiking accounts, trip diaries, local lore about wildlife, and the latest GPS information, making it the perfect backpacker's guide and a great source of insight into Indiana history.

Often compared to the Appalachian Trail, the Knobstone Trail is well respected for its challenging terrain and staggering length. Author and naturalist Nathan D. Strange provides readers with all they need to know to successfully hike the Knobstone Trail and become an expert in the process—from charts indicating camping and water locations, to updated maps providing topographical information, elevations, and horse-trails.

Strange also explores the "forgotten" history of the trail, with background on the natural history of Indiana's forests and the life of Charles Deam, the father of forestry.

Illustrated with 60+ photographs and 19 maps, this guide is billed as a "must have" for a safe and memorable adventure on the trail.

The book may be purchased directly from the publisher. To order, call 1-800-842-6796 or log onto <http://iupress.indiana.edu>.

INPAWS Website Under Evaluation

Marcia Moore is leaving her post as INPAWS webmistress, a position she has held for seven years and which we suspect took many more hours than were covered by the small stipend she received to maintain the site. We are sorry to see Marcia go and hope to benefit from her experience and expertise as we move forward. A committee has convened, focused on ways to keep the site fresh and take advantage of all the technology available

to draw people there—for example, to register for the conference or to join up or renew membership. Members of the ad hoc website committee are Ruth Ann Ingraham (chair), Jeff Pitts, Amy Perry, Matt Newell, Nancy Hill, and Wendy Ford. If there are functions or topics you would like to see available on the website, please let one of us know or email info@inpaws.org.

ing plants, which bloom in summer and late fall. The grass selection was limited, with prairie dropseed and palm sedge the principal representatives. Other bloomers included asters, coneflowers, mints, false sunflowers, nodding wild onions, lobelia, wild indigo and New Jersey tea.

The project was assigned to Marion County Master Gardeners and first directed by Charlotte Cunningham, who withdrew after a few years due to the fatal illness of her husband. Sophia and Dan Anderson have supervised the activity for the last 4-5 years.

The Watanabe Gardens comprise a long, narrow strip next to the covered arcade where school buses discharge their passengers, plus a strip garden featuring an S-shaped walk running between the south entrance and the canal, with large blocks of Indiana limestone placed artistically between or alongside many of the turns. Originally, the canal was intended to represent the Ohio River, and the south end the northern border of the state, with some differentiation of plant species intended, but the distinction has since been lost.

Watanabe Gardens Evolving

When the new Indiana State Museum was opened on West Washington Street, it was decided to do most of the landscaping with Indiana native plants and trees. One area, between the ISM and the Eiteljorg, was designated the Watanabe Gardens in honor of the August Watanabe family, who donated generously to its cost. Another, surrounding the entrance to the underground parking garage, was titled the Turner garden.

In the beginning, shade was limited, and all the initial species were sun-lov-



Illustration courtesy Maria Hastings School.

FIELD NOTES

Over the years, several of the species originally planted have not done well and have had to be replaced. Examples include blue wood aster and purple prairie clover. Some intentional replacements include ironweed, swamp milkweed, and queen-of-the-prairie. Other species, including blue vervain and golden Alexander, have found their way in and are earning areas of their own. The growth of the native trees originally planted has created a shady situation at the canal end, making it necessary to move the sun-lovers and plant shade-tolerant varieties such as wood poppy, wild geranium, wild ginger, and spiderwort.

Four years ago, Dan and Sophia started a seed-collection program, in which seeds of many of the native plant varieties are collected in the fall, cleaned, cold-cycled, packaged, and sold in the museum store. Last year, sales were over 600 packets of thirteen varieties. This year, about twenty varieties will be packaged and sold.

For the last few years, Donovan Miller has taken upon himself the improvement of the Turner Garden surrounding the underground parking entrance, which was long neglected because of lack of volunteers. One year, all the brambles and woody growth were removed. Then, intensive spraying was used to remove the bulk of the Canada thistles. In 2009, a path was constructed through the garden, and last year removal of the remaining weeds and replanting of desirable species were begun.

Dan, Sophia, and Donovan encourage INPAWS members to participate in making these gardens a stand-out attraction in our community so they lead more folks to appreciate the beauty and environmental desirability of native plants. This year, work parties will be held in the mornings of the second and fourth Saturdays of each month from April to October. Volunteers at the ISM receive many benefits such as free memberships (after 40 volunteer hours), museum shop discounts, admission to IMAX previews, and volunteer parties.

For more information, please contact Donovan Miller (djbamiller@aol.com), Sophia or Dan Anderson (danjand1@sbcglobal.net), or Jane Darlage or Karine Huys at the Indiana State Museum.

Mark Your Calendar

Saturday, April 9 INPAWS Hike University of Southern Indiana forest land, Vanderburgh County. Led by Dr. Edith Hardcastle.

Saturday, May 7 INPAWS Plant Sale & Auction

Saturday, May 14 INPAWS Hike Pennywort Cliffs, Jefferson County. Led by Bill & Maggie Adams.

Saturday, June 25 INPAWS Hike Potato Creek State Park, St. Joseph County. Led by Scott Namestnik.

Saturday, July 9 (tentative) INPAWS Garden Tour

Saturday, July 16 INPAWS Hike Henderson Park, Washington County. Led by Allen Pursell.

August hike date and place TBA.

Tuesday–Thursday, September 13–15 The Tallamy Tour Indianapolis, Fort Wayne, South Bend.

Saturday, September 17 INPAWS Hike Kankakee Sands, Newton County. Led by Stephanie Frischie & Alyssa Nyberg.

Saturday, October 15 INPAWS Hike Morgan-Monroe State Forest nature preserve, Monroe County. Led by John Bacone.

Saturday, November 5 or 12 AC2011 INPAWS Annual Conference.

Watch for announcements of INPAWS events and field trips in the mail, via e-mail, and at INPAWS.org.

East Central Chapter Reconfigured

A focus of Tom Hohman's INPAWS presidency has been to expand membership into new areas that have not had chapters. With the successful launching of a new Southwest Chapter, INPAWS Council has been considering some shuffling of counties to better configure chapters around population centers that show promise of membership expansion.

On a trial basis, the membership of the East Central Chapter has been split, merging the Anderson area (Madison, Henry, Wayne, and Fayette Counties) with Central Chapter and consolidating the remaining counties into a new Northeast Chapter centered in the Fort Wayne/Muncie area. East Central's president Alicia Douglass will continue as nominal

president of the Northeast Chapter, in hopes that new membership and leadership can be found, perhaps stimulated by this fall's Tallamy Tour to South Bend and Fort Wayne.

Due to Renew?

Is your INPAWS membership about to expire? Don't miss out on everything INPAWS has to offer. Renew now to keep event notices and *INPAWS Journal* coming to your mailbox and to support our mission of education and conservation.

Look for membership renewal information at inpaws.org or e-mail membership@inpaws.org.



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2011 INPAWS Native Plant Sale & Auction

Using Native Plants to Attract Pollinators

Saturday, May 7
Trinity Church / St. Richards School
3243 North Meridian Street, Indianapolis

9:30 a.m. Presentation: Using Native Plants to Attract Pollinators

10:15 a.m. Doors Open to Plant and Book Sale

11:15 a.m. Native Plant Auction Begins

Want to Be Pollinator Savvy?

Come to the Pre-Sale Presentation

Learn what you need to know to make pollinators feel at home in your garden. Admission to the presentation is \$10 and includes entry to the plant sale 15 minutes prior to the official opening of the sale event, plus a \$10 coupon toward any purchase made at the auction. Registration for the presentation will begin at 9:00 a.m. at the door.

New to the Sale?

Find Plants, Books, and Camaraderie

Whether you are just starting your native plant garden or seeking more native plants to incorporate into your landscape, the plant sale is a great place to find native plant material not readily available from most garden centers. Woodland, prairie, wetland plants, trees, and shrubs will be available as well as books related to native plants and wildflowers. The sale offers a wonderful opportunity to meet other native plant enthusiasts and share information. Proceeds support the INPAWS mission.

Plant Sale Veteran?

Attend the Auction, Volunteer, or Donate Plants

The Native Plant Auction is packed full of entertainment (thanks to our engaging auctioneer, Mike Stelts) and knowledgeable commentary from such experts as Sue Nord Peiffer, Kevin Tungeswick, and Hilary Cox. The discussion is informative year after year because the plants available in the auction change every year.

Experienced plant sale shoppers and native plant gardeners are needed to volunteer for setup on Friday evening (4:00 to 8:00 p.m.) and Saturday morning (7:00 to 10:00 a.m.). Knowledge of native plants is helpful, though not necessary.

Plant donations are welcome from established gardens and supportive businesses. Self-seeded or spreading plants should be potted two to four weeks before the sale to give the plant time to adapt to its sale-ready potted environment. Businesses wishing to donate native plants, trees, shrubs, or related gardening items will be recognized as a sponsor of the event.

To volunteer, contact Ross Nelson at 765-717-1228 or rossavius@gmail.com.


DOGGED BOTANIZING

Native Silverberry —or Evil Twin?



Patricia Happel Cornwell, Indiana Master Naturalist

It was early May, and I was walking up the road to rescue an Eastern box turtle that had stalled mid-road. I was stopped in my tracks by an overwhelmingly sweet, spicy fragrance like the perfume of an old lady. Looking around I found, not an old lady, but a huge silvery bush full of creamy blossoms. How long had that been growing in the corner of our field? Years, apparently. It was eight feet tall and just as wide.

I hoped it was native, because it was good-looking and delicious-smelling. I broke off a sprig and took it up to the house. My husband said, "Oh, you mean that big bush I've been meaning to chop down?"

In *Native Trees, Shrubs and Vines* (William Cullina, New England Wild Flower Society, 2002) I found a look-alike, *Elaeagnus commutata*, native silverberry. The photo showed only leaves, but they were elliptical with crinkled edges, a good match for my sprig. From there, I went online to investigate the *Elaeagnus* family.

Native silverberry's black-sheep relatives include the infamous autumn olive and Russian olive. Autumn olive is native to eastern Asia, Russian olive to Asia and southern Europe. Highly invasive, both were introduced into the US in the 1800s for erosion control and landscaping, and both can still be bought in garden stores. A less-known invasive is "thorny Elaeagnus," *E. pungens*, which nurseries also sell. Its foliage is variegated, so I ruled it out immediately.

Continued page 4

◀ The mystery silverberry,
photographed by the author.

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All are invited to submit articles, news items, and event postings of interest to our membership. Acceptance for publication is at the discretion of the editor. INPAWS welcomes opposing viewpoints.

Please submit text and photos via e-mail to wwford@comcast.net or via land mail to INPAWS JOURNAL, 6911 Cabernet Way, Indianapolis IN 46278.

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Spring
February 23 for April 1 mailing

Summer
May 23 for July 1 mailing

Autumn
August 23 for October 1 mailing

Winter
November 23 for January 1 mailing

INPAWS Mission

To promote the appreciation, preservation, conservation, utilization and scientific study of the flora native to Indiana and to educate the public about the value, beauty, diversity, and environmental importance of indigenous vegetation.

Membership

INPAWS is a not-for-profit 501(c)(3) organization open to the public. For membership information, visit www.inpaws.org.

News and Views

Information to be shared with INPAWS members may be directed to membership@inpaws.org.

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Indiana Urban Forest Council

Established in 1991, the Indiana Urban Forest Council is a nonprofit organization dedicated to promoting public awareness of Indiana's urban forests in and along parks, greenspaces, streets, and urban woodlands. The Council assists Indiana communities in protecting, expanding, and improving their urban forests. Membership is open to communities, tree boards, beautification committees, private organizations, corporations, non-profit organizations, students, individuals, and anyone with an interest in and appreciation of Indiana's urban forests.

The IUFC annually hosts winter and summer programs and a fall conference. These events serve as networking opportunities for urban forestry volunteers and professionals to meet others with the same ideals and challenges in our Indiana communities. These events also host nationally known speakers and presenters working on the latest urban forestry trends. IUFC Awards are presented annually to Indiana's outstanding projects and people in urban forestry.

The 2011 IUFC Summer Conference will take place July 13 at Coffee Creek Watershed Preserve in Chesterton, five miles from the Dunes of Lake Michigan. The meeting location will give weary conference attendees a break from the norm with a pavilion setting, an outdoor lunch, and a walking tour of a beautiful area of the state that has been affected by emerald ash borer. The Nature Conservancy and Indiana Wildlife Habitat Council will talk about restoration projects that are putting trees, native landscapes, and wildlife back in places where industrialization had taken over.

To learn more about the Indiana Urban Forest Council, visit www.iufc.org.

PRESIDENT'S MESSAGE

The Perfect Tree

I just finished reading a book called *American Chestnut: The Life, Death, and Rebirth of a Perfect Tree* by Susan Freinkel. It tells the history of the American chestnut, including its importance to both wildlife and people, its almost total elimination at the hands of the chestnut blight, and efforts to save it from extinction. The blight is a non-native fungus imported by people (of course). In addition to being enjoyable reading, the book raised some interesting questions, mostly related to efforts to bring the tree back.

For those who don't know the story, the blight was first noticed at the New York Zoological Park in 1904. In the next 40 years it spread across the entire natural range of the chestnut tree, which included portions of Indiana, and killed between three and four billion trees. In many of those areas the chestnut tree had been the single most important tree in the forest.

Scattered specimens of the tree are still living today, many located outside the tree's natural range. Some have sprouted from the roots of former trees only to be attacked eventually by the same fungus. Others survive but don't thrive, apparently having some minimal natural resistance to the fungus.

Continued page 5



Native Silverberry

continued from page 1

Numerous websites offered descriptions and photos of Russian and autumn olive, but nowhere did I find a comparison of these undesirables with native silverberry. As I scoured the Internet, a variant of a Sesame Street jingle ran through my mind. "Which of these things is not like the others?"

The only good description I found of native silverberry (*E. commutata*) was at www.gardenguides.com/taxonomy/silverberry-elaeagnus-commutata. This perennial member of the Oleaster family is found only in the wild. It is highly tolerant of cold, drought, and poor soil and provides cover and food for birds. Its fragrant tubular flowers are white or cream and bloom in clusters from the leaf axils. Its leaves are simple, alternate, crinkled, and silvery, its branches thornless. This sounded promising.

Like silverberry, both Russian and autumn olive have tiny fragrant flowers, but those of the Russian are yellow and not tubular. All three have deciduous, alternate leaves. The leaves of autumn olive (*E. umbellata*) are green above, silver below; those of Russian olive (*E. angustifolia*) silvery on both sides but slender and willow-like. Both autumn and Russian olive have thorns.

My shrub's leaves appear dusty green above, silver below—similar to autumn olive, but it has no thorns—like native silverberry. Autumn olive has small juicy, red fruits; Russian olive has large silvery fruits shaped like olives. Silverberry has small round silverberries.

Maps on the Purdue Extension Service pest species website (<http://extension.entm.purdue.edu/caps>) show autumn olive established in every Indiana county, but Russian olive only in Tippecanoe, far north of me here in Harrison County. Autumn

olive was not reported in the state in 1899 (Stanley Coulter, *Catalogue of Indiana Plants*) nor in 1940 (Charles Deam, *Flora of Indiana*), but by 2002 it was in every Hoosier county (William and Edith Overlease, *100 Years of Change in the Distribution of Common Indiana Weeds*, Purdue University Press, 2006).

Invasive.org, the repository of The Nature Conservancy's invasive species database, advises getting rid of autumn or Russian olive in the fall by cutting back the trunks, then applying herbicide to the stumps. Cutting, mowing, or burning without using herbicide only increases re-sprouting.

Given Russian olive's detection in only one distant county, its narrow leaves and non-tubular flowers, I eliminated it. That left silverberry's evil twin, autumn olive.

A week later, the first ox-eye daisies were blooming, and I walked back down the hill to take another look at the "suspect." One source said silverberry blooms in June, but here my specimen was, finished by Mother's Day. A week before, its heavy scent made me dizzy, but now there wasn't a hint of a flower or a fragrance.

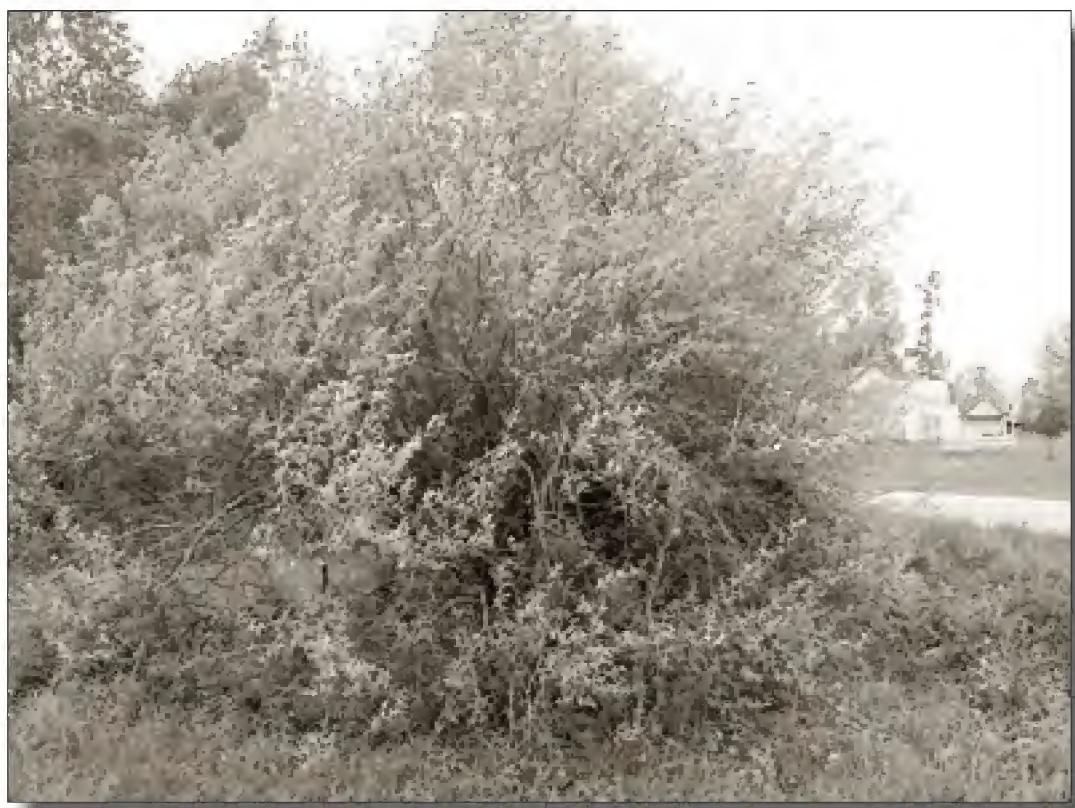
But neither was there a hint of a thorn, and native silverberry is thornless.

Once you see a house finch and a purple finch side by side, you will never misidentify them again. But it is very unlikely that an autumn olive and a silverberry will ever line up side by side to give me such an opportunity for comparison.

Frustrated, I e-mailed Kay Yatskievych, research associate at Missouri Botanical Garden, author of *Field Guide to Indiana Wildflowers* (Indiana University Press, 2000), and the brain behind the downloadable Flower Finder for Indiana Spring Wildflowers.

To my dismay, Kay's reply introduced me to yet another invasive Elaeagnus: *E. multiflora*, cherry silverberry. She cited an entry for the species in the *Manual of Vascular Plants of Northeastern United States and Adjacent Canada* (Henry Gleason and Arthur Cronquist, New York Botanical Garden, 1991).

I doggedly visited 15 web sites for *E. multiflora* and discovered that it is established in some parts of the eastern US (but not in Indiana), and is grown as an orchard tree in the northwestern US. Nurseries market this native of China, Korea, and Japan variously as Sweet Scarlet, Red Gem, Goumi, Gumi, or Natsugumi. It is a thorny, shrubby tree that matures to nine feet high. It is characterized by elliptic leaves that are green above and silver/brown below, creamy four-lobed flowers borne April to May singly



The Perfect Tree

continued from page 3

Many efforts to battle the fungus and prevent the demise of this once great tree have showed promise, but all failed. However, recent attempts are beginning to offer a glimmer of hope—and raise some interesting questions.

The most publicized recent effort involves crossing surviving American chestnut trees with the Chinese chestnut, which has good natural resistance to the fungus, and then backcrossing the hybrids with American chestnuts to get a tree that genetically is more than 90 percent native American. Obviously, this process is long and laborious, but it has resulted in developing trees that some believe can be reintroduced in North America. Others are bothered that this tree will not be a pure American chestnut, and question whether it should be reintroduced.

Another group is working strictly with surviving American chestnut trees, trying to magnify the natural resistance these survivors seem to have. This group thinks they will eventually be successful, but they are still a long way from having a tree that can be reintroduced.

A third group is trying to use modern biotechnology methods to transfer genes into the American chestnut tree that will make it immune to the blight. This approach makes a lot of people nervous, wondering if the transfer of totally unrelated genes into the trees will yield unexpected results. Given the tree's long lifespan, it will be many years before any unexpected results become known.

or in pairs in the leaf axils, and small oval berries that ripen to red in mid to late summer.

One northeast grower, who had planted 200 *E. multifloras*, complained, "I had to prune them after one year because they smothered the apple trees." Another said, "The deer don't eat them, as they have everything else, and I can harvest a unique berry for the tourist market."

So where did that leave me?

I considered the facts about *E. multiflora*:

- Its leaves are dark green above, silver/brown below, and not crinkled—unlike my bush's crinkled dusty green and silver leaves.
- Its flowers are creamy, faintly speckled with brown, and grow from the leaf axils singly or in pairs—unlike my bush's flowers, which are pure ivory and bloom in clusters of up to five.
- The tubular flower of *E. multiflora* ends in four lobes that are noticeably larger than those of my bush—or those in photos of *E. commutata*, native silverberry.
- *E. multiflora* is thorny—unlike my specimen.

Based on these differences, I ruled out *E. multiflora*, but I am still left with the possibility of *E. umbellata*, autumn olive.

Although I understand the misgivings toward the 90 percent American chestnut, I am excited and supportive of its reintroduction. The irony is that, as a promoter of native plants, I am normally not thrilled by their cultivars and usually do not plant them in my home landscape. Am I being inconsistent? Possibly. But to me the benefits outweigh the negatives. Besides, the thought of a genetically engineered tree being reintroduced into nature really scares me. If the 90 percent American chestnut tree is viable, there will be no need for the bioengineered one.

—Tom Hohman

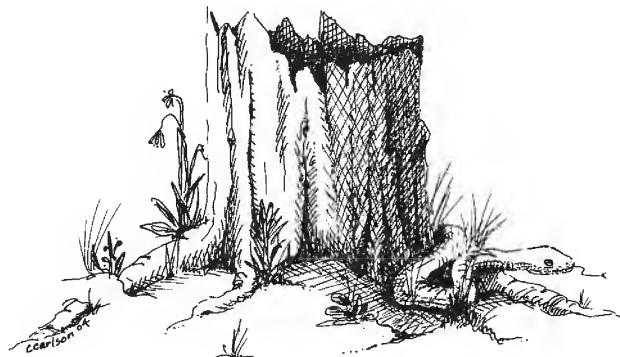


Illustration by Chris Carlson in R.A. Ingraham, *Swimming with Frogs*.

Kay noted, "*E. umbellata* is very common in south-central Indiana where I do most of my botanizing. I do have a record of an escape of *E. multiflora* [in LaPorte County] and it's possible that it's more widespread, since it and *E. umbellata* are difficult to tell apart."

She added, "Good luck with your identification. If it is *E. multiflora*, that would be an interesting record, given how big your plant is."

If there is a chance that the giant shrub in my field is native silverberry, I don't want to kill it. There remains one last clue, but I will have to be patient. Small, silver fruit in the fall: native. Red fruit: invasive.

At the first sight of a red berry, I will send my husband down the hill with the hatchet.

SHRUBS

- 7 Staghorn sumac *Rhus aromatica*
 1 Golden falsecypress *Chamaecyparis pisifera aurea*

- 1 Pyramidal arborvitae *Thuja occidentalis*
 'Holmstrup'

- 7 Hancock coralberry *Symphoricarpos*
 'Chenaultii'

SEDGES

- 64 Frank's sedge *Carex frankii*
 64 Yellow fox sedge *Carex annectens* xan.

FORBS

- 16 Marsh milkweed
Asclepias incarnata
 32 New England aster
Aster nova-angliae
 16 False blue indigo
Baptisia australis
 32 Purple coneflower *Echinacea purpurea*
 32 Wild geranium *Geranium maculatum*
 16 Sneezeweed *Helenium autumnale*
 16 Monkeyflower *Mimulus ringens*
 32 Blue flag iris *Iris virginica shrevei*
 32 Blackeyed Susan *Rudbeckia fulgida speciosa*

INPAWS members Ken Remenschneider, Donovan Miller, and Wendy Ford are founding members of the Friends of Cold Spring School, which fosters partnerships to lend expertise and enthusiasm to the learning community at this IPS environmental studies magnet. Buoyed by the rain garden experience, Remenschneider, a landscape architect, recently led campus master planning for the school's historic buildings and lands.

Rain, Rain, Come

It's a beautiful 2011 spring day—birds singing, flowers blooming, and their fragrances wafting through the freshly washed air following a May rain on the grounds of Cold Spring School, Indianapolis Public Schools' environmental studies magnet. INPAWS' own Donovan Miller, Cold Spring's Chief Steward of Greenhouse and Composting Operations, prepares for another day of student activities. Today's challenge: dead-heading last year's faded foliage and removing nuisance weeds. The site: a rain garden installed the previous May by volunteers from the American Society of Civil Engineers with the assistance of Cold Spring School students.

May 2010: Rain Garden Performs First Flush Treatments

As the children file out the building and head toward today's project, 8-year-old Kenneth James confronts Mister Donovan (that's what the kids call him): "Why do we have to do this work? And what's the big deal about rain gardens anyway?"

Mister Donovan, in his quiet, reassuring voice, replies: "Why Kenneth, there are many reasons to build and tend a rain garden!"

- First of all, it's a beautiful combination of plants that change throughout the seasons!
- Second, a rain garden can be entirely planted with native plants that support many types of insects, birds, and other animals. We can enjoy all of these as they visit our garden. By providing food, nesting areas, and cover from predators and foul weather, we can be certain to enjoy their presence for years to come.
- And that's not all. This garden employs plants that enable rain water to soak back into the ground to sustain our local landscapes and trees, rather than rushing into our streams and rivers.



▲ A lesson in surveying and associated math skills.

◀ ASCE volunteer explaining the fine points of hydrology.
 Photos by Graeme Sharpe.



& Stay

Ken Remenschneider, ASLA, CLARB
Remenschneider Associates, Inc.

► Finally, a rain garden does a great job of treating the first flush of airborne and surface pollutants that come with the rainwater at the beginning of a storm. The plants in our garden, with the help of bacteria and other microbes, capture and filter these pollutants. Eventually they break them down and convert them into harmless, even beneficial compounds.

Mister Donovan notices he still has not motivated young Kenneth James. So he takes another tack. "Do you see that monarch butterfly over there in the rain garden?"

"I do!" replies Kenneth. "Our teacher Ms. Hammon taught us about their cool life cycle and the way they go from egg to larva to cocoon to butterfly, all in one year!"

Mister Donovan shows Kenneth the milkweed plant in the rain garden where the monarch will lay her eggs later this summer. He assures Kenneth that if he helps tend the garden, Donovan will let Principal Darragh know when the monarch larvae hatch, so that Kenneth's class can come to observe their voracious eating habits. Before long, Kenneth James is busy at work alongside his classmates, planting milkweeds for the monarchs.

Master Gardener Donovan Miller donates his time at Cold Spring School managing the greenhouse, school composting operations, and "hands-on" class greenhouse projects. He also faithfully tends the school's cultivated landscapes, including a prairie, the rain garden, and a native plant demonstration garden. Donovan is a member of the INPAWS Youth Outreach committee and spearheaded the initiative to create Letha's Youth Outdoors Fund.



Cold Spring School students dig in, installing 400 plugs of forbs and sedges.

What It Took to Build the Rain Garden

The rain garden project was a collaboration between adult volunteers and the children of Cold Spring School. Its genesis was a \$20,000 grant from United Water for the construction of rain gardens at local elementary schools. The intent: to educate children about water—the very same water we've had since the beginning of time—and how it cycles through our environment. Volunteers at Remenschneider

Associates, Inc., designed the basin and specified the plants. Volunteers from the Indianapolis Branch of the American Society of Civil Engineers (ASCE) engineered the design and supervised the construction.

The engineers' project plan provides a snapshot of the collaboration and addresses the most challenging aspect—getting everything in place for "game day" to run smoothly.

Week Before Planting: Volunteer tree service contractor clears rain garden site and grubs out existing plantings.

Several Days Before: Volunteer contractor completes dirt and tile work. More than 30 cubic yards of soil are excavated and removed, and more than 40 lineal feet of drain tile are eliminated. One 12-inch diameter drain tile is installed for overflow storm events. A photographer stands by to document the steps.

Two Days Before: Volunteers are on hand when plants arrive at the school to open plant boxes, organize plants in a staging area, and keep them watered once a day until planting. (This was a good teaching opportunity: children were engaged in this effort and learned which plants were which.) Seventeen native shrubs are planted by the volunteer landscape contractor.

Game Day: The volunteer rain garden team arrives early to lead the operation. Another 12 adult volunteers, working in half-day shifts, come to assist in and oversee activities in the morning and afternoon.

Six-foot tables are set up to stage the 400 perennial plant plugs in advance of engaging 4th and 5th graders in the planting. The plants are labeled and a plant poster with the garden design prepared for the students' use. They plant the slopes of the

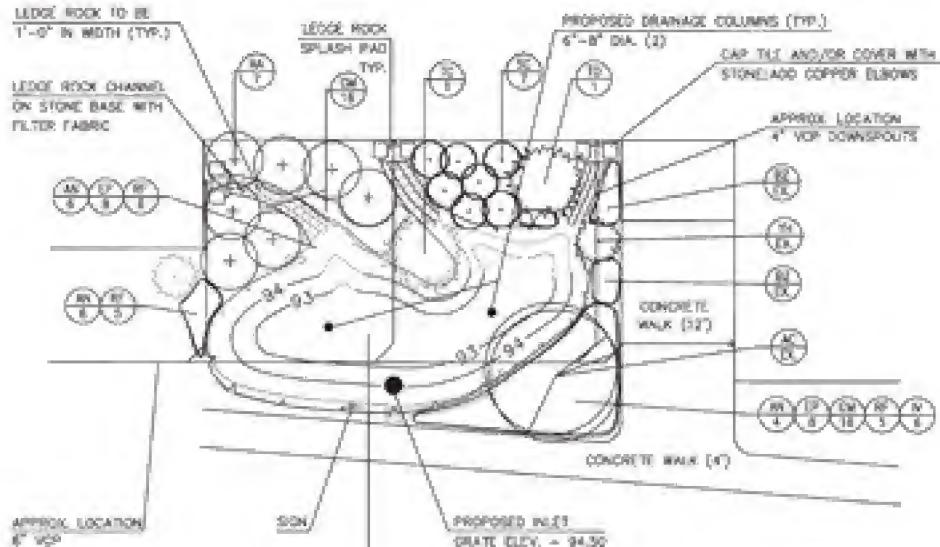
Rain Garden

continued from page 7

rain garden basin first, the basin bottom next, and the meadow areas at the upper rim of the basin last.

Aftercare: The rain garden team presides over watering, which should happen every third day when dry. Sprinklers are best for this critical need.

A year later, the rain garden begins the season with a flush of new growth. To date, no rain events have overflowed the basin, which means that the rain garden plants and the engineering design are doing a fantastic job of putting the storm water back into the ground to recharge groundwater supplies and reduce runoff and erosion.



Sponsors of the Cold Spring School rain garden were the Indianapolis Branch of the American Society of Civil Engineers, ASCE's Environmental and Water Resources Institute, and United Water. Supporting sponsors were Remenschneider Associates, Inc., Smock Fansler Corporation, Greenleaf Landscape, and Spence Restoration Nursery.

A Learning Lab

In terms of education, the rain garden installation is a win-win for students, adult volunteers, and teachers alike. The site was chosen for greatest visibility—right by the school entrance, and coincidentally the site of three downspouts that were carrying superheated water and pollutants from the roof directly into local streams and rivers, to the detriment of aquatic life.

With the rain garden so close at hand, students can see the water being treated in the way that Nature intended, percolating slowly into the soil to recharge the aquifer and eventually daylight into streams, cleansed of pollutants and back to a normal temperature and rate of flow.

For the ASCE volunteers, it was a welcome opportunity to show children why math is important and why science is interesting. Students learned to use the transit and level for surveying, they learned about the hydrologic cycle, and they became familiar with native plants appropriate for a rain garden—sedges and forbs. For the teachers, the project provides an opportunity to build many lessons for the classroom around the math, biology, and hydrology of the rain garden.

Landscape architect Ken Remenschneider and the ASCE rain garden team worked with the children and teachers in advance of game day so that they already knew

a lot about why they were planting a rain garden. "The beauty of an elementary school rain garden project can be seen in the eyes of the children," says Remenschneider. "Through the caring tutelage of their teachers and ASCE volunteers, they come to understand the benefits to native plants, wildlife, and the water that sustains life on earth, and they get excited about having a positive impact on our environment."

Visitors to Cold Spring School will find a sign posted near the entrance telling the rain garden story long after the students who planted it move on to middle school.

A Trip to Little St. Simons Island, Georgia

The Nature Conservancy Legacy Club sponsors trips to biologically rich places around the US. Some of you may get these brochures and be tempted but uncertain about paying the pricey fee. Bobbi Diehl sprang for such a trip and found it "definitely worth the cost." Read on.

When my husband Jim and I received the 2011 TNC Legacy Club trip brochure in January, we immediately focused on the May 8-14 stay at Little St. Simons Island, an unspoiled Georgia barrier island near the Florida border, and signed up as soon as we could. Let's just say we were ready for a major change from shoveling snow, and hang the expense! That May trip filled up immediately, but TNC kindly decided to sponsor a March overflow trip, and we were on the list.

No more than thirty guests at a time can be accommodated on the 10,000-acre island, which consists of salt marsh, maritime forests with cypress, live oak, and slash pine, and seven miles of beaches. It is accessible only by boat. Today the island is partially owned by descendants of Philip Berolzheimer (Eagle Pencil Co.) who acquired it in 1908. About five years ago former Treasury Secretary Henry Paulson and his wife, Wendy, purchased three-quarters of it for a reported \$32.65 million. The couple are serious nature lovers and visit the island several times a year.

On 10 March we left for the two-day drive to Georgia. Once on big St. Simons Island, we parked the car at the Marina and, along with our nine fellow TNC travelers, boarded the boat for the ride to Little St. Simons. En route, all we could see was the expanse of marsh grasses, broken up with waterways. A second boat followed with our luggage, which was unloaded and left outside the door of our assigned rooms.

The home base of our island stay was the old Lodge. Its front parlor, decorated with deer heads, featured an amazing fireplace and a well-furnished bar where guests could help themselves to libations or a Georgia microbrew on tap. A back parlor/ natural history museum offered additional seating. Appetizers were served during cocktail hour, and most meals were served family style in two nicely appointed dining rooms. One day we rode in the trucks to a beach and were served a picnic luncheon of beef fajitas and corn and crab chowder. The first evening, we were treated to a shrimp boil. The last, an oyster roast, where we were fur-



Carolina jasmine (*Gelsemium sempervirens*), a staple of Southern gardens. Photo courtesy www.gardensoyvey.com.

nished knives and special gloves to wear, and taught how to open the critters.

The cooks and servers produced excellent, beautifully presented food under rigorous conditions. The fresh herbs and salad greens are grown in their (fenced in) organic garden, which is lovingly tended, and in general they take advantage of seasonal produce. Among the many "green" practices on the island, they maintain a compost pile, and little plastic is in evidence.

We visitors stayed in two guest houses with four bedrooms each (eight guests share the living room with fireplace and screen porch) and several guest cottages. The accommodations were spacious and comfortable, but not luxurious—a shower in the bathroom, for instance, but no tub. The screened windows opened to catch the breezes, and there was also a sliding door to the back deck. A ceiling fan provided additional breezes when necessary.

As a Midwesterner, I was puzzled at first that the views from our room (in Cedar House) changed constantly. Sometimes we had a water view on two sides. Other

times there was only marshland. When the penny dropped, I was fascinated by the coming and going of the tides. Our stay luckily coincided with the full spring moon, when the tides are especially high. One moonlit night we were taken out to Main Beach after dinner at high tide. It was chilly but lovely, with the moon reflected in the ocean.

Different excursions were offered every day. Several times a week there was an early birding hike, or an evening hike to look for night birds. Guests could hike, bike, boat or ride around the island in the back of one of the big white pickups driven by the six naturalists on staff. The naturalists are the crown jewels of the resort. They know everything about the island, and love to impart their knowledge. One of them, Ben the herpetologist, loves to show guests his favorite snakes. In his company, we saw three different Eastern diamond-backed rattlesnakes and assorted other reptiles and amphibians, including many alligators from babies to huge adults.

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Arundinaria gigantea

Brad Salmon, Bamboo Afficionado

Allow me to begin this article with a confession—I am an avid bamboo grower and proponent. This generally puts me at odds with native plant enthusiasts, due to the “running” species of bamboo’s capacity to colonize an area and spread beyond desired boundaries. Although more properly classified as a spreading plant than an invasive, bamboo can indeed become problematic when planted irresponsibly. I think that the appropriate use of this valuable plant, with more than 1,200 species, has the potential to curb the destruction of native bamboo forests, but that’s a topic for another forum.

When bamboo first captured my attention, I consumed every article, book, website, and conversation I could find on the plant, and was surprised to learn that a species of bamboo is native to southern Indiana—*Arundinaria gigantea*.

The US has three recognized native species of bamboo, all forms of *A. gigantea*, including two sub-species: *A. gigantea* ssp. ‘Tecta’ and the newly recognized deciduous form, *A. gigantea* ‘Appalachiana’. Originally it ranged from Maryland, Virginia, and Florida to Texas, northward to Missouri and the Ohio River Valley, in its northern-most range of south central Indiana forming vast “canebrakes” or groves.

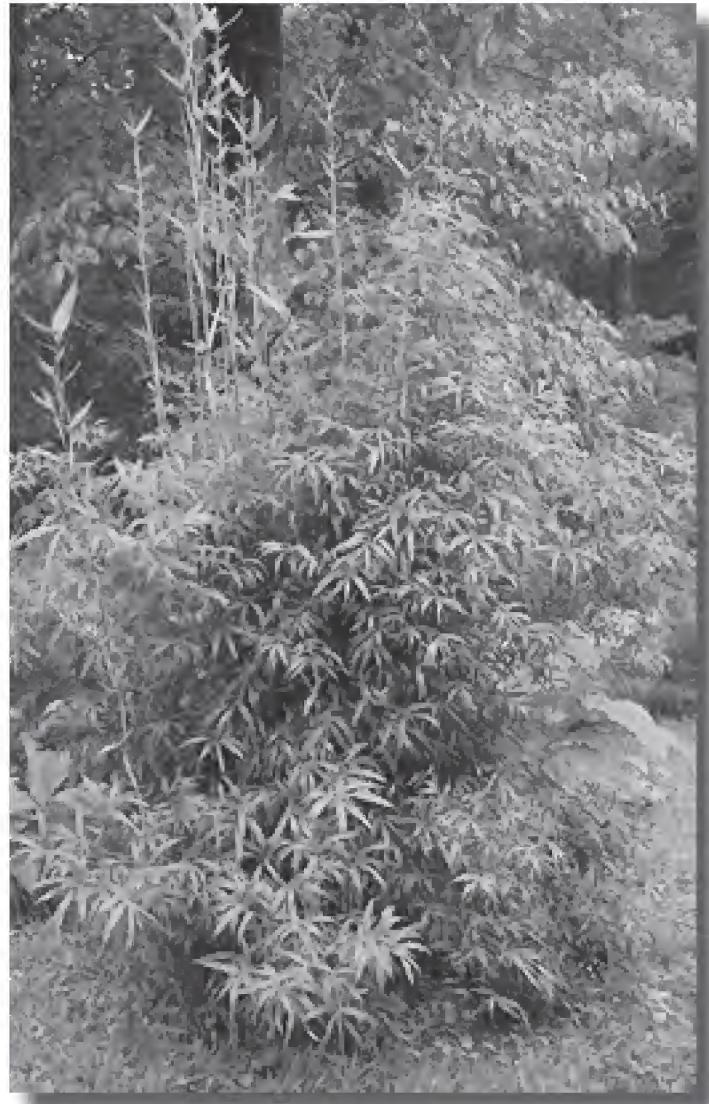
This bamboo has a rich and important history in the US, but in my experience few people are aware of this threatened native Indiana plant. I suspect that few readers of this journal have ever encountered *A. gigantea* in the wild despite its once having been widely distributed in the state.

Listed at the right are some notes from Charles Deam regarding the location of native groves. I have attempted to find some of these stands to see if they continue to exist but have had little success in finding more than a few scattered plants.

A. gigantea forms colonies on silt-rich streambanks, the canes generally ranging from 1 to 5 meters in height by 1 to 3 centimeters in diameter. The groves produce new canes in early to mid-summer. These first-year canes have “persistent culm sheaths” and only one or two simple branches during the first year. In subsequent years, additional branches and foliage leaves tiller up the initial branches, increasing significantly in years two and three.

Bamboo is a unique plant in that it rarely flowers and sets seed, with decades between flowerings, but the entire grove flowers at once, setting vast amounts of seed. There are local tales of how fat the squirrels were during periods of the canebrake flowerings. Over the years, *A. gigantea* has flowered and produced multiple clones, somewhat adapting to local conditions and resulting in varying form and appearance.

Native Americans utilized the bamboo for basketry and also hunted the canebrakes, as they knew that wildlife sought refuge there.



During the civil war, the underground railroad used the vast network of groves for concealed passage during the northern migration. In some groves, the density was estimated to be 65,000 culms per acre. As settlers moved about, they learned to associate the canebrakes with fertile soil, and huge areas were cleared for farming, breaking up the vast groves into small islands.

The extinction of the passenger pigeon, Carolina parakeet, and Bachman’s warbler can all be attributed to the loss of the canebrakes.

Brad Salmon is pleased to introduce you to this rare Indiana native plant. For more information, contact Brad at info@needmorebamboo.com.

“Plant Detectives” on Hiatus

Faithful contributor Barbara Plampin, PhD, is taking a break this issue to pursue a major research project. She’s off seeking a lost lake in northeast Porter County. Read all about it in the next *INPAWS Journal*.

Native Bamboo Sightings by Charles Deam

Clark—In a low place in a Beech & Sugar Maple woods 1-1/2 miles southeast of Borden.

Dubois—1.8 miles north of Birdseye on dirt road along Lick Fork; small stand in poorly drained soil near road; with *Rhus*, *Typha*, and other grasses; culms to 2 meters tall, all sterile; T2S R3W S13 SW 1/4; elevation 570 feet.

Gibson—In a low woods on the north side of Eggwood Pond which is about 5 miles northwest of Patoka. This pond is an old White River channel.

Gibson—Goose Road - First flowering.

Harrison—Lower edge of wooded slope between Locust Point and Rosebud.

Harrison—Rocky wooded bluff of the Ohio River 3 miles west of Mauckport.

Jefferson—Old Chamber's place.

Knox—In a low woods in 1 mile of the southwest corner of the county. Associated with *Ulmus americana*, *Gleditsia triacanthos*, *Corylus laciniosa*, *Tecoma radicans*, *Cercis canadensis*, *Ambrosia trifida*, etc.

Lawrence—Low woods and along fence rows, waste places, and foot of wooded slope, ½ mile north of Huron. One specimen measures 9 feet. Well established. Partly associated with *Quercus sensibilis*, and *Cephalanthus*. Also along Beaver Creek.

Perry—Wooded Bluff of the Ohio River between Tell City and Cannelton.

Posey—In a low woods on the north side of Pitcher Lake, about 5 miles northwest of Mt. Vernon.

Posey—River Valley Hoovey Lake.

Posey—Bank of the Wabash River about ½ mile south of Pitcher Pond, of about 5 miles west of Mt. Vernon.

Ripley—A colony about 100 feet long along a roadside ditch near a house on high ground about 2 miles southeast of (Cross Croes Crres ?) Plains. All plants about 6 feet high. I think it has been introduced but I was not able to see people at house. No one at home.

Scott—Near creek bank 2 mi. N., 2 mi. W. of Scottsburg.

Spencer—In a slough 5 miles southwest of Rockport.

Spencer—Plants 5-9 feet high. In 29 about 7 miles southwest of Rockport.

Warrick—In a slough 3 miles southeast of Newburg.

Washington—A small colony in the trough of a beech ravine on the rocky wooded slope at Big Spring Church about 6 miles north of Palmyra. The colony seemed to form a band across the ravine. No doubt a native here.

Little St. Simons Island

continued from page 9

Stacia, another naturalist, is an expert on the plants and birds. One morning she led us on a botany hike in some of the wooded portions of the island. From her we learned that the showy vine with yellow flowers that was growing along along I-95 and also blooming in their forest is a native, Carolina jessamine as they call it down there (*Gelsemium sempervirens*), not a non-native as I'd feared. It is assertive, but I was assured it does no harm. An invasive native, Spanish moss (not Spanish and not a moss), is everywhere, hanging from the live oaks and bald cypresses and lending that Southern-gothic atmosphere. You can tell you're not in Indiana from the understory forest species—cabbage palm, palmetto, red bay, wax myrtle, and *Magnolia grandiflora*. In the salt marshes, different species of grass grow, depending on the elevation of the land (as little as 2 cm makes a difference!). I saw no kudzu on the island. One of the few invasive non-natives I did see is bull thistle. The naturalists destroy it whenever they encounter it.

One morning Stacia drove Jim and me out to the beach, which we had all to ourselves for birding and shelling. It was low tide, and we saw many unusual shells. She picked us up an hour later and told us the names of the ones we had collected.

Little St. Simons is known as one of the best birding spots on the East Coast. About 220 species migrate through, nest, or reside year round. European fallow deer (brought over as game animals) and armadillo also live on the island, and otters, dolphins, and whales swim off shore. Raccoons are a major predator, but the alligators help to keep them in check. Feral pigs may swim over and cause tremendous damage, so traps are occasionally set for them. The non-native fallow deer are destructive as well; word is that the Paulsons would like to remove them but the Berolzheimers want to keep them. So far they remain.

If this all sounds idyllic, it certainly was to us. Even the weather was warm but not too warm—in the 70s. But when you ask someone there what is the best time to visit, the response is, "What kind of bugs do you like?" In March, visitors may encounter a few mosquitoes and lots of sand gnats, but later come horse flies, black flies, etc., etc. Baskets of bug repellent are stashed on the porch of each cabin and house and on all the trucks, but they do little to deflect the bugs. I ended up pretty much ignoring them. A fellow guest outfitted herself in an Original Bug Shirt (www.bug-shirt.com), and next time I'll do the same.

On 19 March, we packed our bags, took a fast ride back on the boat, and parted from our TNC friends, promising to stay in touch. We picked up our luggage, which had been transported on the second boat, loaded it in our very dusty and bird-poop-covered car, and headed home to Indiana.

A sojourn at Little St. Simons may not be for everybody. But it is most definitely suited to the nature lover or birder who likes comfortable, not posh accommodations, excellent food and drink, and peace and quiet. Did I mention the lovely scents of the forest and ocean? Little St. Simons was a wonderful interlude and just what we needed—in short, well worth the money.

Legacy Club trips are open to Nature Conservancy supporters who commit to conservation by making a life-income gift with the Conservancy or by naming the Conservancy as a beneficiary in their estate plans. Details at www.nature.org/gift-planning/legacy-club.

Landscaping with Native

Saturday, July 9
10:00 a.m. to 4:00 p.m.

Registration is limited.
To receive addresses
and directions to the
gardens, send an e-mail to
gardentour@inpaws.org
or phone Amy Perry
at 317-696-5074.

INDIANAPOLIS NORTH SIDE

Perfectly Imperfect Woodscape

Work-at-home couple Marcia & John Miller glory in the forest vistas framed by the large windows of their prairie-style home, especially when the palette turns to gold in the fall. To embellish the views, they "painted" their property with perennials and shrubs, leaving just a little lawn for contrast.

Close to the house the yard has an Asian feel, matching the décor of the spare interior rooms. From Japanese maple, alumroot cultivars, and hostas, the plantings transition to ever wilder woodlands that fill with naturally occurring Jacob's ladder and myriad other ephemerals in the spring.

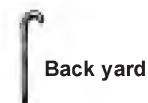
The front yard wears a neat and trim look to appropriately greet clients visiting the home office. Islands of neatly bordered mixed native and exotic plantings include ornamental viburnums, ferns, Virginia sweetspire, goatsbeard, crested iris, and pagoda dogwood. The side yard sports a native biohedge that nourishes the local birds, who provide avid birder Marcia with endless entertainment from the kitchen and living room windows.

The backyard ravine is the real jewel of the property. Descending from the raised deck, you'll view massed native shrubs and wildflowers reflecting a woods edge plant community. Statuesque Joe-Pye weed and bottlebrush buckeye provide drama in their turn, and Virgin's bower disguises a chainlink dog run. Descend further and you're lured by a bridge and sitting area in a natural woodland recently rescued from truckloads of euonymus wintercreeper. Emerging from the streamside woodland into a meadow, a meandering path leads past a persimmon to a street-side exit framed by walnut saplings and cup plant.

The perfection in this property is in the overall design intent and planted woods



edges; the imperfection is in the natural processes (windblown and bird-borne seeds) that have created a patchwork diversity of species over the years in this woodsy haven. Under Marcia's laissez-faire policy, if a wildflower seed lands among other plants, it gets to live there. The mix of species creates a happy jumble that eliminates the need for obsessive weeding.



Praising God's Handiwork

Echoing a trend for congregations to steward the land as part of their spiritual mission, Lisa Meek led the drive to use native plants in the landscaping of her beloved church. Her motivation: to compensate for what urbanization has done to the environment and to provide habitat for birds, butterflies and "good" bugs. Other congregants have pitched in, planting and maintaining the gardens.

Lisa's plan was launched two years ago when old, overgrown foundation plantings were ripped out. With its new landscaping, the church is graced by a large rain garden, wildflower and exotic ornamental

Coneflower illustration by Chris Carlson in
R.A. Ingraham, *Swimming with Frogs*.

Plants 2011 Garden Tour



islands in the parking lot, and a sample prairie. Redbud trees against a backdrop of evergreens screen a meandering walkway that invites contemplation of Nature's wonders. Species on display include mountain mint, culvers root, coneflower, cardinal flower, butterfly weed, bee balm, showy blackeyed susan, prairie dropseed, two varieties of sedges, and wild blue iris.

This example of the "green congregation" movement demonstrates how one person can spearhead an education program that touches a wider audience than just avid gardeners—and have fun doing it.



Wilderness in Suburbia

Husband-and-wife team Mary and Barry Miller value wildlife so much that they've created an Indiana Wildlife Federation Certified Wildlife Habitat in the midst of neat, trim suburbia. No "wild" look here, though. Their self-designed creation fits beautifully into the neighborhood, with contained gardens nestling against the house and fences. The front yard's minimal lawn

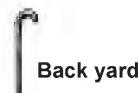
sets off a butterfly/rain garden and a bed of natives and select non-natives that curves invitingly from street to front porch. Judiciously used decorative trellises and a lamppost lend height to the plantings.

To the swing set and patio in the traditional suburban backyard the Millers have added prairie plants, an herb garden, a vegetable garden, and water-capturing plants in a long ditch where subdivision stormwater flows.

On display at this garden will be compass plant, asters, cup plant, meadow rue, rattlesnake master, wild quinine, columbine, liatris, ironweed, and boneset.

Mary and Barry leave the grasses and forbs standing over the winter to provide cover for wildlife. Birds twittering and cheeping signal their approval of this arrangement. Goldfinches will abound in July.

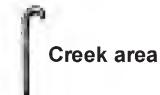
INPAWS will be selling its new tee-shirts, hoodies, and hats at this residence the day of the tour.



pop up as the slow germinators make their appearance. The grasses include side-oats gramma, big and little bluestem, and Indian grass.

Beyond a traditional lawn and blackberry patch, a large swath of woods lines a wide creek. Birdsong fills the air. One of the couple's goals was to return quail to the area, and quail abound there now. The woods were planted using a seedling package available from the Department of Natural Resources Division of Forestry and now provide a veritable arboretum for those wishing to explore native trees and shrubs, including Kentucky coffee, black gum, persimmon, pawpaw, and five varieties of oak.

Adding to the intrigue, Lisa and Mike just happen to maintain a small airport and keep horses along with this treasure of native plants.



LAFAYETTE AREA

Additional tour gardens may be scheduled in the Lafayette area. Visit www.inpaws.org for further announcements.

Farm Country Cornucopia

Refugees from suburban Carmel, the new owners of 77-acre Creekside Farm in Hamilton County wanted to decrease the amount of lawn there was to mow. Tallgrass prairies were the answer! Four huge stretches of grasslands sprawl along the long entrance drive and behind the upscale farmhouse. The spacious property retains a peaceful park-like ambiance—you feel as though you can see forever!

Lisa Meek and husband Mike Warren use good wildlife practices to manage the prairie areas, burning or cutting two each year. They planted the prairies five years ago with a seed package containing 27 different varieties of forbs, including butterfly weed, Culvers root, cup plant, and white snakeroot. As expected, each year a few types of forbs heretofore unseen

Pressed Plants Chart City's Vanishing Native Flora

More than half of the world's population now lives in cities, yet we know little about how urbanization affects biodiversity. In one of the first studies of its kind, ecologists in Indianapolis have used 70-year-old dried plant specimens to track the impact of increasing urbanization on plants. The results were published in April 2011 in the British Ecological Society's *Journal of Ecology*.

Led by Dr. Rebecca Dolan, Director of the Friesner Herbarium, Butler University, the team examined 2,800 dried plants collected around Indianapolis before 1940, comparing these with plants they and their students found at 16 field sites between 1996 and 2006.

They discovered that increasing urbanization has wrought major changes to Indianapolis's plant species. Although the city supports a similar number of plant types as it did before 1940—around 700 species—today's flora has fewer native plants and more non-native species or "exotics," which have been introduced from other parts of the world and are now spreading on their own.

The study found that over the past 70 years, Indianapolis's native plants have

been lost at a rate of 2.4 species per year, while over the same period 1.4 non-natives arrived each year. "This study shows that our flora is becoming less distinctive," Dolan laments.

This toll comes against a backdrop of already horrendous losses. In the 1820s, 98 percent of Marion County, Indiana, was covered in forest. More than 70 percent of this was beech and maple upland forest, with a small amount of oak-hickory forest on drier ridges. One hundred years later, about 80 percent of the land had been given over to agriculture. Rapid urbanization in the 1960s and 1970s reduced the forest even further, to around 18 percent.

Plants now lost to Indianapolis include Queen-of-the-prairie (*Filipendula rubra*), a member of the rose family with fantastic wands of pink flowers. It was last found growing in a damp spot by the Water Company Canal at 52nd Street in July 1935. Another loss is the Virginia bunch-flower (*Melanthium virginicum*), a member of the lily family with striking stalks of white flowers.

Exotic arrivals include the invasive Japanese knotweed (*Fallopia japonica*) and Amur bush honeysuckle (*Lonicera maackii*). "Japanese knotweed was brought to our area as an ornamental," says Dolan. "It spreads readily by seed and by root sprouts, forming thickets that choke out native species. Amur bush honeysuckle was once promoted by the USDA's Soil Conservation Service for erosion control and wildlife food, but we now know it does neither. Instead, it has spread and become a pest plant, covering the banks of many of the city's streams and woodland edges, and land managers spend a lot of money eradicating it."

The study has important implications for cities, pointing to a loss of biodiversity and a threat posed by non-native species. Because so many people now live in cities, Dolan says, urban floras are becoming increasingly important. "As cities continue to grow, urban green spaces are becoming important refuges for native biodiversity and for people. In coming decades, most people's contact with nature will be in urban settings, so the social importance of urban plants has never been greater."

The study sends a clear message for the future: Be careful when planting non-



Queen-of-the-prairie (*Filipendula rubra*) was last seen in Indianapolis in 1935.

native plant material, especially in great numbers, because introduced non-native plants are likely to become pests.

Learn more about the study in *Rebecca W. Dolan, Marcia E. Moore, & Jessica D. Stephens (2011), "Documenting effects of urbanization on flora using herbarium records."* *Journal of Ecology* (18 March 2011), doi: 10.1111/j.1365-2745.2011.01820.x. Copies of the paper and photographs are available upon request to Marc Allan at mallan@butler.edu.

The Friesner Herbarium, Butler University, a systematic collection of over 100,000 dried, pressed, and preserved plant specimens, completed the first phase of digitizing its collection this year. For more information, visit www.butler.edu/herbarium.



Dried specimen of sensitive fern (*Onoclea sensibilis*) from Friesner Herbarium, Butler University.

FIELD NOTES

2011 INPAWS Small Grants Awarded

This year, the Small Grants program received a record breaking number of applications! It is positive to see expanding interest in native plants and the effort individuals and groups put into such projects. Thank you to the members of the grant committee for all of their hard work and dedication! Awards went to the following:

Cold Spring School's Native Plant Demonstration Garden, Marion County

Native Prairie Park at Morocco Lions Club, Newton County

Native Wildlife Habitat Gardens at Wesselman Woods Nature Preserve, Vanderburgh County

Wildlife Habitat at 37 Place in Indianapolis, Marion County

Hands on Habitat at Union Elementary School, Zionsville, Boone County

Expansion of Taltree's Native Plant Garden, Valparaiso, Porter County

Rain Garden at The Timbers of Indianapolis, Marion County

The deadline for 2012 Small Grant applications will be February 1, 2012.

Boot Brush Effective at Owen County Preserve

The Nature Conservancy installed a boot brush station at Green's Bluff Nature Preserve (Owen County) years ago, concerned about hikers introducing garlic mustard or stiltgrass into this popular preserve. INPAWS Invasives Education chair Ellen Jacquot leads spring wildflower hikes there every year and is always looking for that first garlic mustard plant of the season. On an April hike, she found it—a first-year seedling that came up in the gravel under the boot brush! After seeing that (and taking a picture and then pulling it), she searched even harder in the preserve but found no garlic mustard. "I'm not suggesting boot brushes are a perfect solution," Jacquot says. "Clearly, not everyone will use them, and animals or water can certainly move seeds around, too. But it is good to know that it appeared to work in this case."

Mark Your Calendar

Saturday, July 9 INPAWS Garden Tour Indianapolis north side. E-mail gardentour@inpaws.org or phone 317-696-5074 to register.

Saturday, July 16 INPAWS Hike Henderson Park, Washington County. Led by Allen Pursell.

Tuesday, September 13 Doug Tallamy in Indianapolis.

Wednesday, September 14 Doug Tallamy in Fort Wayne.

Thursday, September 15 Doug Tallamy in South Bend.

Saturday, September 17 INPAWS Hike Kankakee Sands, Newton County. Led by Stephanie Frischie & Alyssa Nyberg.

Saturday, October 15 INPAWS Hike Morgan-Monroe State Forest nature preserve, Monroe County. Led by John Bacone.

Saturday, November 12 AC2011 INPAWS Annual Conference.

Watch for announcements of INPAWS events and field trips in the mail, via e-mail, and at INPAWS.org.

Now Available! INPAWS Logo Apparel

Thanks to the efforts of Nancy Hill and Kelly Spiegel, you can purchase colorful INPAWS tee-shirts, hoodies, and hats at selected INPAWS events. Display your passion for native plants by wearing a coneflower, Jack-in-the-pulpit, or logo straw hat wherever people congregate this summer. Items will be for sale at the INPAWS garden tour.



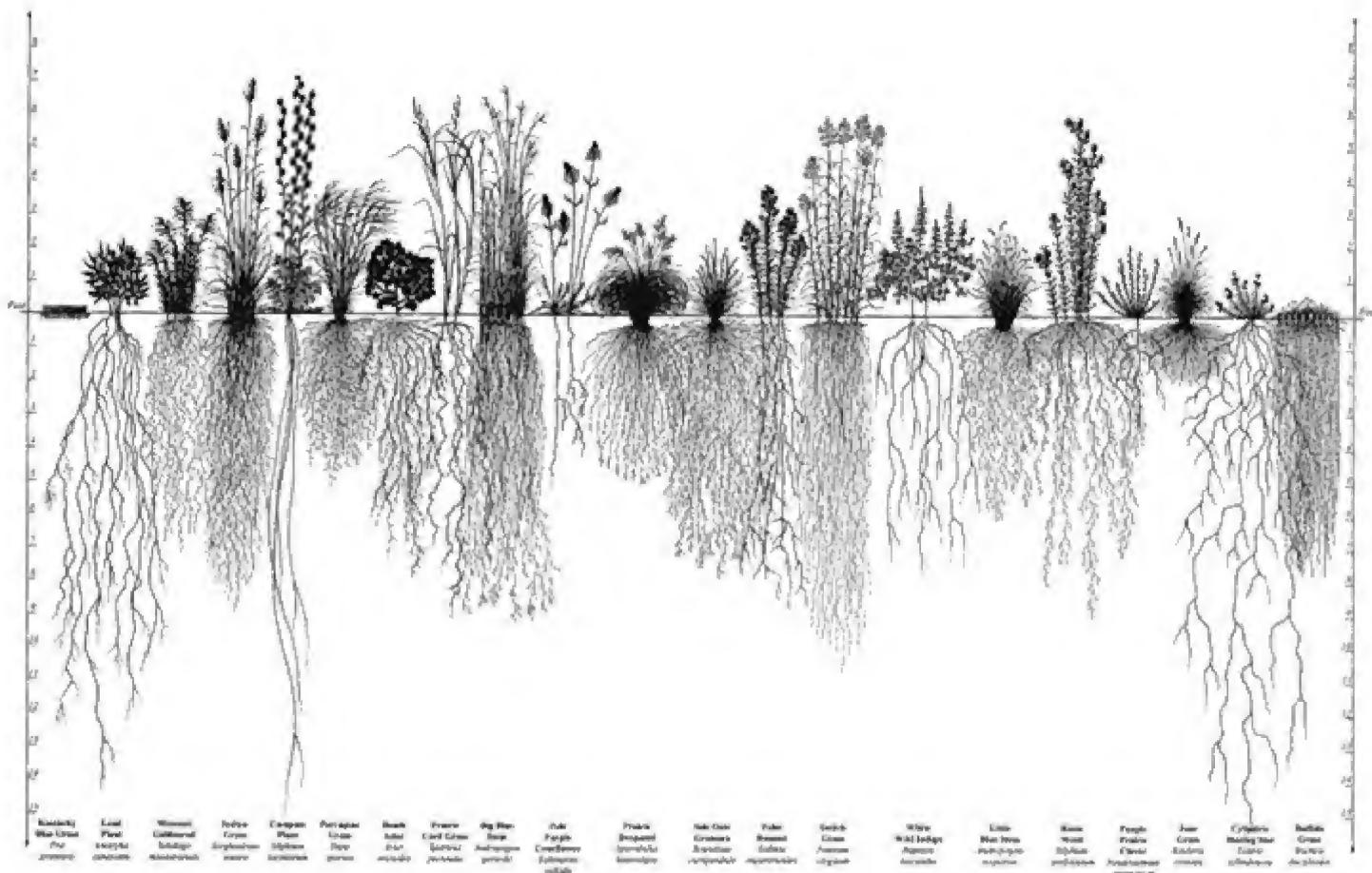


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Why Native Plants Belong in Rain Gardens

An often reproduced drawing, worth repeating for those intending to keep rain on their property instead of rushing it off into sewers and storm drains. Native plants' extensive root systems improve the soil's ability to infiltrate water and withstand wet or erosive conditions. Note the greater biomass below the surface than above in the depicted grasses and forbs. Compare them to Kentucky Bluegrass, shown on the far left, with its shallow root system. *Illustration provided by Heidi Natura of the Conservation Research Institute. Find the full-size illustration at USDA Natural Resources Conservation Service.*



Public Nuisance No More

Wherein our intrepid urban homesteader joins forces with SustainIndy to make the city weed ordinance more native plant friendly.

Fiona Becker, Friend of Native Plants

Two years ago, INPAWS published an article about my adventures in gardening with native plants in Indianapolis. To recap, I live just southeast of downtown in the Fountain Square neighborhood and have been avidly gardening there for ten years.

One noticeable thing about my landscaping is the substantial swath of native plants along the sidewalk at the front of the yard. This prairie and rain garden planting attracts a lot of attention—some of it, unfortunately, in the form of complaints to the City about the “weeds” in my yard. The past decade has seen my native plantings cited many times as an “environmental nuisance” in violation of the Indianapolis 12-inch grass and weed height restriction.

After many failed attempts to defend my garden to the Office of Weed Enforcement, I decided to try something different.



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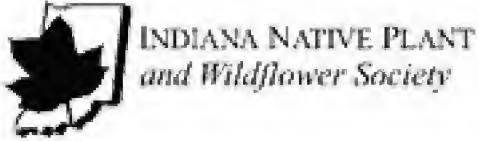
I began to search for a way to improve the bad weed law in Indianapolis.

I contacted many people—City-County Councilors, agency employees, and garden clubs around Indianapolis—and found that many other gardeners had run into the same problems with their native plantings. I also discovered that the Mayor’s Office of Sustainability (SustainIndy) was starting a process to amend the weed law in the City-County Code, their aim being to exclude rain gardens and native plantings from the vegetation height restrictions.

In July 2010, I received yet another citation for tall weeds. This time I got in touch with SustainIndy for assistance

with resolving the violation and to find out how the amendment to the weed law was progressing. In response to my query, a staff member from the Office of Sustainability contacted me to ask if she and another City staffer could meet with me and tour my yard. Since in all of my correspondence with the City I had offered it the opportunity to tour my garden, I was thrilled to invite staff of the Office of Sustainability and the Department of Code Enforcement for a visit.

As we toured my gardens in late July, I found out that SustainIndy had a team working with the Office of Weed



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All are invited to submit articles, news items, and event postings of interest to our membership. Acceptance for publication is at the discretion of the editor. INPAWS welcomes opposing viewpoints.

Please submit text and photos via e-mail to wwford@comcast.net or via land mail to INPAWS JOURNAL, 6911 Cabernet Way, Indianapolis IN 46278.

Submission deadlines for specific issues are as follows:

Spring
February 23 for April 1 mailing

Summer
May 23 for July 1 mailing

Autumn
August 23 for October 1 mailing

Winter
November 23 for January 1 mailing

INPAWS Mission

To promote the appreciation, preservation, conservation, utilization and scientific study of the flora native to Indiana and to educate the public about the value, beauty, diversity, and environmental importance of indigenous vegetation.

Membership

INPAWS is a not-for-profit 501(c)(3) organization open to the public. For membership information, visit www.inpaws.org.

News and Views

Information to be shared with INPAWS members may be directed to membership@inpaws.org.

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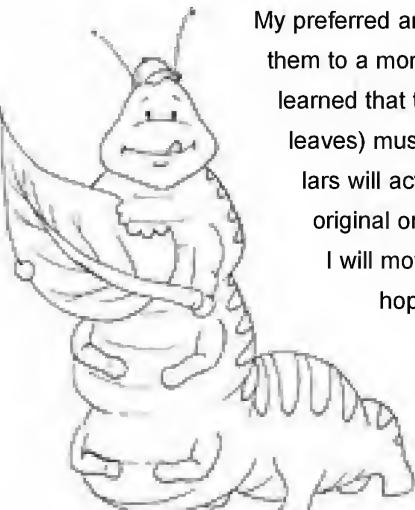
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Tests of Resolve

Sometimes we are tested to see how committed we are to native plant gardening, and helping nature in the process. I've experienced my share of these moments.

Several years ago I had a problem with something cutting off the heads of my purple coneflowers. Every flower seemed to suffer this fate just as it was preparing to bloom. I eventually learned that it was weevils doing the damage, so that they could lay their eggs in the still hanging flower head and have a protected location for their young to develop. I recently saw a posting on INPAWS' Facebook page about others having this same problem and wondering what to do.

I was also chagrined to discover that butterflies seem to prefer to lay their eggs on young, newly purchased plants instead of on mature specimens available elsewhere in my garden. (Actually I don't think they care that the plants were purchased, just that they are young and tender.) I want to allow the caterpillars to develop into moths and butterflies, but how far do I go with this? If left alone, they will strip the new plants.



My preferred answer on the caterpillars is to gently move them to a more established plant of the same species. I've learned that this more established plant (with old tough leaves) must be more than a few feet away or the caterpillars will actually leave the older plant and return to the original one. If I don't have others of the same species, I will move them to another plant that is similar, and hope for the best. In reality, it won't help either my plant or the caterpillars if they strip the plant and run out of food.

On the weevils cutting off the heads of my coneflowers, or more recently rosinweed, my reaction is less gentle. I have gotten very good at spotting the little pests and

putting an end to their flower head cutting days. There are, after all, limits.

But speaking of Facebook, INPAWS' Facebook membership is now up to 427. Not all those signed up are active participants, but I've seen a number of lively discussions on identifying unknown plants, possible plant or seed exchanges, upcoming events, and suggested solutions to native plant gardening problems.

If you surf the Web and have not yet visited INPAWS on Facebook, you really should give it a try. Join the conversation, and discover where it leads you.

—Tom Hohman

INPAWS PARTNERS

Butler University Center for Urban Ecology

The Center for Urban Ecology was founded in 2004 by faculty and staff in the Department of Biological Sciences at Butler University, Indianapolis. Their vision: to be a national leader in the study and practice of urban ecology.

Viewing the city itself as an ecosystem, the Center explores the relationships between urban organisms and their environment. Their projects include setting up rain barrels, an urban farm, working with Keep Indianapolis Beautiful to monitor their I-70 native plantings, researching bird strikes on city windows, and studies on urban squirrels and box turtles.

In the liberal arts tradition, Center scholars view urban ecology as inherently interdisciplinary and aspire to create within Butler and in the city of Indianapolis a culture that recognizes the fundamental importance of ecological knowledge for a sustainable society.

The Center for Urban Ecology's mission is to innovatively explore, steward, and enhance urban ecosystems. The Center operates with a foundation in ecological science and facilitates interdisciplinary research and education, place-based projects, and public discourse by engaging Butler students, faculty, staff, and community partners.

Public Nuisance No More

continued from page 1

Enforcement, the Health Department, Marion County Soil and Water Conservation District, and the City Legal Department to clear up the confusion between native plantings and tall weeds. They planned to propose an amendment to the City-County Code excluding rain gardens and native wildlife plantings from the vegetation height restriction in the fall of 2010.

Under the revised ordinance, property owners would be able to register their gardens in the Rain Garden Registry and/or the Native Wildlife Planting Registry to take advantage of the exclusion. This would be a free program, featuring a simple, straightforward application process.

We discussed ways that SustainIndy could get the word out about the registry programs, and I was enlisted to testify at the upcoming Council committee meeting where the proposal would be considered. The staffers took photos of the gardens as acceptable examples of native landscaping to aid in the future training of Weed Enforcement Inspectors.

Late in September 2010, the proposed change to the weed ordinance was heard and passed by the Public Works Committee. The following week, it also passed a vote by the full City-County Council. I was able to testify in favor of the amendment and was quite pleased to be a part of the process of helping to make the Indianapolis code slightly more native plant friendly.

This spring, SustainIndy opened the Rain Garden and Native Planting Area Program on the indy.gov website. In addition to the registry for Rain Garden and Native Planting Area, there are resources for building your own rain garden.

The application for the garden registry requires basic information about the size and location of the garden, a sketch of the planting plan, photographs of existing gardens, and a table of the plants planned or already planted.

I proudly submitted my application and was soon contacted by an "Urban Conservation Team Member," who set up a site visit to check out my rain gardens and native planting areas. We did a walk-through to check that the information I had provided in my application was correct.

A few days later, I received the approval letter stating that my native planting area

and two rain gardens were officially in the garden registry. I also received a sign to post in my yard, which states "This native planting area provides important environmental benefits and is registered with the City of Indianapolis. It is not to be altered without the property owner's approval."

Now that my gardens are registered with this program, they will be exempt from the 12-inch height restriction for the next five years, after which I will be able to renew my registration in the program. Meanwhile, the sign in the yard will indicate to Code Enforcement Inspectors that my gardens are exempt.

The new garden registry may not be a perfect solution for native plant lovers who live in the city, but it is a definite step in the right direction.

Time after time I have felt frustrated and powerless as I received weed law violation notices and had to argue with city employees about my "weeds." But this year, when I got yet another tall grass and weed violation in the mail—before I had a chance to install my registered garden sign—I was able to dispute the violation successfully in short order with a brief email. It was extremely satisfying.

To register native plantings and rain gardens in Marion County, please visit <http://www.indy.gov/eGov/City/DPW/SustainIndy/WaterLand/GreenInfra/Pages/RainGardenResources.aspx>.



HINT: Renew your INPAWS membership

Meet INPAWS' New Leadership Team

The INPAWS Nominating Committee is proud to announce the following slate of officers for 2012–13. You can greet them and vote them in at the INPAWS Annual Conference.

Art Hopkins and his wife Glory live just outside Columbus, in the south-central part of Indiana. Their three acres are mostly wooded now, with almost all native plants, and there's less than half as much lawn as when they bought it 20 years ago, though still a bit too much. Art has been a member of INPAWS since 1996, has written newsletter articles, and presently serves as INPAWS Vice President. A Registered Landscape Architect with a master's degree in Landscape Architecture from Cornell University and more than 20 years' experience, Art is drawn to native plants and sustainable design. When not working, he enjoys volunteering with the Boy Scouts, camping, canoeing, and cycling. He and Glory have two almost-grown children, a Valparaiso University junior and a high school senior. Art looks forward to helping INPAWS continue to grow over the next two years as INPAWS President.

Melissa Moran lives in the Nora area on the northside of Indianapolis with her husband Dan and daughters Monica and Helen. She has been most involved with INPAWS as plant sale co-chair, having served in this role in 2005, 2006, 2009, and 2010. She enjoys working with native plants on her home property, with much help from her family,

and admits there is more she would do if only time and resources allowed. Melissa has a bachelor's degree in Mechanical Engineering from Purdue University, and a Master's degree in Environmental and Water Resources Engineering from the University of Texas at Austin; she now works for ARCADIS. She looks forward to continuing her involvement in INPAWS in the new role of Vice President.

Chris Carlson, illustrator of Ruth Ann Ingraham's book, *Swimming with Frogs*, has the distinction of being the first editor of INPAWS Journal. She credits her four-wheel drive vehicle with being instrumental in the founding of INPAWS, as founder Bill Brink used it to plow through a snowstorm to attend an organizing meeting at Ruth Ann and Joe Ingraham's house. Retiring after 11 years of fundraising and friendraising with Butler University's Office of Advancement, Chris has gone back to freelance writing and illustrating and is active with civic organizations and Friends of White River. She gave her lawnmower away four years ago and is doing everything she can to live a green and sustainable existence with the four furry kids that share her home. She admits to being a serious collector of party lights! May they shine brightly on her new role as Recording Secretary.

Fiona Becker has worked for The Nature Conservancy in Indiana since 1998, starting out as a field steward doing prairie and wetland restoration in Northwest Indiana. She has spent the last 10 years working with geographic information systems (GIS),

doing conservation planning, and weeding the native landscaping at the Indianapolis office. Fiona and her husband Doug live in the Fountain Square neighborhood of Indianapolis. Fiona gained some notoriety with the City of Indianapolis over the last few years due to the "tall weeds" that she has planted in the native prairie landscaping in her front yard. She's now a proud member of the SustainIndy Garden Registry. When Fiona isn't tending her garden, she can often be found kayaking, dancing, and traveling. In spare moments, she fields questions from visitors to the INPAWS website as Corresponding Secretary, a role she has kindly assumed early to fill in for Hilary Cox who has retired to Arizona.

Marilyn Frohberg got her start in gardening with her grandmother's radish sandwiches. Her introduction to INPAWS was finding the Invasive Plant List, and then learning of the Native Plant Sale from Ruth Ann Ingraham. A former Chicago suburbanite who once favored more conventional landscaping, she still considers herself a novice native plant gardener. Her 27 years in the banking industry and stints as treasurer and auditor for nonprofit organizations will be put to good use as INPAWS Treasurer as she strives to continue the efficiencies of her predecessor. Her aim: to enable INPAWS to continue providing educational opportunities for school children and interested gardeners.

when you register for AC 2011. You'll always know when your next renewal is due!

Tales of a Vanished Lake

Part I

Occasionally, the Indiana Dunes National Lakeshore botanist asks a colleague and me to do some research. This year, we're studying how such post-settlement acts as farming, timbering, the railroad, the highway, drainage, fire, and a real estate development have affected an 800-acre section of Great Marsh, a wetland that once stretched all the way from Michigan City to Miller—all this to find out what became of a lost lake and a lost bog once embedded in the marsh.

Imagine us taking a break in the present-day marsh. Our machete-wielding helper has hacked a trail through the surrounding underbrush, and we've passed random clearings perhaps made by would-be marijuana farmers. Otherwise, only scientists come here, either to study exotics or to search for massasauga rattlers. We're seated on folding stools surrounded by rice cut grass (*Leersia oryzoides*) and numerous Michigan holly (*Ilex verticillata*) shrubs, their vermillion fruits almost aglow under the cloudless blue sky.

Now go back in time: Pottawatomies and settlers fish in a teeming, 300-acre lake known, like many others, simply as Fish Lake. To the west, native cranberries (*Vaccinium macrocarpon* or *V. oxycoccus* or both) flourish plentifully. In the distance stands the tamarack bog. To the north, see men driving oxen pulling white pine toward a local sawmill.

About 1859, Chauncey Blair, a Michigan City entrepreneur, bought 10,000 acres including the lake and the bog. He drained the marsh. After failing to raise Clydesdales here, Blair decided to raise cranberries commercially. Records show that in 1882, 6,000 bushels of cranberries were marketed at \$3.00 a bushel. Underlings really ran the farm; Blair himself had gone to Chicago where, as a banker, he twice saved the city from financial ruin.

View, some time before 1900 until 1926, convicts from the Michigan City State Prison hoeing cabbages—over 16,300 heads of them—and onions. Some years they tend cattle, and by 1926, when the state legislature tells the Prison to vacate the Farm, they are raising mint and distill-

ing mint oil, perhaps selling it to the newly erected Smith Brother's Cough Drop factory in Michigan City.

In 1927, Fred'k Bartlett, as he styles himself, buys the land, drains it again, plats the dry land around the marsh and every bit of marsh and bog as well. He has 10,000 lots to sell in the projected town of Beverly Shores. He and brother Robert, using high-pressure salesmen, sell all the lots by 1946. The marsh lots most definitely do not stay drained.

These are some of the things we've discovered as, ultimately, the result of an old timer's disrupting a circa 1985 public lecture on the town of Beverly Shores by announcing that his grandmother gave birth in the cranberry packing shed at Fish Lake. What Fish Lake? What cranberries? None of us has ever heard of cranberry farming in the Lakeshore, let alone of Fish Lake. This story gets repeated through the years until our boss puts us to work.

Complicating our research is an article reporting that the old timer himself was born in the cranberry shed in 1910. Were the Prison Farm and the commercial cranberry enterprise in business simulta-

neously? In 1910, the cranberry operation had to have been small because there were only four acres in cranberries in all of Indiana.

A very few cranberries still grow in the Lakeshore's Pinhook Bog in La Porte County. I've seen visitors all but genuflect before the scanty shrubs and their one or two berries. Old records report extensive cranberry marshes in Porter County at settlement and, later, other commercial marshes besides Blair's. Today, no one knows of a single cranberry in Porter County. Probably drainage is the guilty party. Possibly cranberries will be "installed" in Cowles Bog: one of Cowles's students, May Thielgaard Watts, saw them there when she hiked with Cowles before her 1918 graduation from the University of Chicago.

Partly as a result of researching cranberries before and during our study, our friend Eva Hopkins has decided to raise some plants herself. She ordered three- to four-year-old plants in 6-inch pots from Cranberry Creations in Maine (<http://cranberrycreations.com>). She prepared an 8 x 3 foot bed of half sand and half peat



Oxen illustration courtesy www.gutenberg.org, First Lessons in Geography. White pine illustration courtesy of www.chestofbooks.com.



Vaccinium macrocarpon, a native cranberry.
USDA-NRCS PLANTS Database / Britton,
N.L., and A. Brown. 1913. An illustrated flora
of the northern United States, Canada and
the British Possessions. 3 vols. Charles
Scribner's Sons, New York. Vol. 2: 705.

mixed, watering daily. As of mid-August, she is the "proud mother of four big cranberries at \$25.00 plus each. I hope they are more productive next year."

Next time: The Mystifying Vanished Tamarack Bog



SUMMER STORMS

The Good, the Bad, the Downright Ugly

Gene Bush, Avid Gardener and Nurseryman

Dateline July 2011, DePauw, Indiana. We—my garden and I—experienced a strong summer storm yesterday evening. Winds of up to 70 miles per hour and a couple of inches of driving rain blew through my garden. Walking around the garden, lawn, and around my home, I made some observations and judgments about the results.

Ugly

Seeing dead branches on my lawn, I thought of the photos in the news this morning covering the storm damage. I have a few weak or dead limbs on the lawn, but homes close by have entire trees in the street, or on their roofs, or crushing their cars. Luckily there were no deaths or personal injuries or things could have been much more ugly.

Bad

I am not going to enjoy walking my lawn picking up limbs before the next grass cutting this week. But I see that what lies on the lawn is dead, or very weak growth. Bad that I have to clean up the mess, but perhaps not so bad that nature took care of some pruning chores for me.

There were two large limbs the size of small trees down in the garden paths—one a walnut, the other from a cedar tree. Both lay in paths and not on plants. If I leave the limbs, I am willing to bet the deer will not try to walk through the debris but will have to change their habits when visiting their local snack bar I call my garden. But then, my path would be blocked as well. I clear the path; the deer and I can continue as usual.

Good

I see where perennials heavy with seeds have been blown over. The green dragon (*Arisaema dracontium*) is heavy with seed this year, and I noticed all are leaning over or already down. They will continue to live, and the seeds will mature, but when the seeds fall they will be away from the parent plant. There will be room to grow, and one day the seedlings will have seeds of their own. Some seeds that I had intended to collect are blown to who knows where for now. Next year I may find out. Perhaps nature has a method to her seemingly random summer huff.

A Mix

I now have some clean-up work to do, but nature has been busy giving a helping hand. She pruned the dead wood so it would not fall on me or another gardener. There is new moisture in the rain barrels and gardens—you can almost hear the perennials sucking it up. Nature assisted me in sowing some seeds now and in the fall, and she lowered the temperatures so I can get back out in the garden once more. It's a mix that seems to favor my side of the equation.

Gene Bush owns Munchkin Nursery, a prime source of ornamental shade plants, including many natives, in southern Indiana. You can follow his blog and sign up for his newsletter, Green Clippin's, at www.munchkinnursery.com.

Welcome New INPAWS Members

CENTRAL

Frank Bogan
Brook Park Elementary
Cary A. Floyd
Marilyn J. Frohberg
Julie Gottschalk
Cassie Hall
George M. Hillenbrand II
Barbara Laurence
Peggy Lehman
Angela Meister
Dan P. Millar
Barry and Mary Miller
Brian and Michelle
Muckerheide
Matthew Newell
Allen and Linde Paris
Robin-Elizabeth Parsley
Patricia Prather
Lori and Kelly Queisser
Benjamin Ross
Ingrid Bagge Wiebke

NORTHEAST

Marggie Faley
Barbara Nohinek, M.D.

OUT OF STATE

Susie and Bill Tyler

SOUTH CENTRAL

John Lawrence
Mark and Peg Lindenlaub
Kay Mueller and Tom
Gruenenfelder
Ruth Pelouch
Steve Wirth and Stacy Deck

SOUTHWEST

Patty S. and Dennis T. Avery
Paul Bouseman
Harlen Michele Gorman
Adam Hape
Jeffers Nature Preserve
Janice Jones
Sarah Allenbaugh Karges
Georgie Murphy
Paula L. Riggs
Arthur Schroeder
Jan Wilson

WEST CENTRAL

Linda Byer
Chris Currey
Allison Klement
Abigail Lima

GROWING YOUR OWN

My Introduction

My wife is an Indiana native. I'm an exotic pest from Southern California.

We moved to Indiana about four years ago with our two kids. My terms for agreeing to leave California, the only home I had ever known, were that we live near water and that our property have lots of big trees. We ended up in a subdivision near Geist Reservoir, northeast of Indianapolis, surrounded by mature trees and within walking distance of the water.

During our first spring, I began exploring the Reservoir on my paddleboard—something like the long surfboard that surfers use to stay in shape when the surf is flat. For years before I had enjoyed early morning workouts in the Pacific Ocean, silently cutting through glassy water alongside kelp forests, dolphin, fish, and pelican.

I quickly discovered that Geist Reservoir is no Pacific Ocean. The springtime water is murky and sometimes smells like fertilizer. As the weather gets warmer, the water turns green. Bloated carp bobble in the milfoil, and the bottom is squishy with nutrient-rich sediment.

I started to get into gardening. One of my first discoveries as a backyard botanist was poison ivy. By summer, while paddling the Reservoir with open poison ivy sores, I became ill. I learned that the Reservoir was contaminated with a toxic strain of blue-green algae and wondered if the water had made me sick.

So much for my Indiana ocean. At least I still had my wooded lot.

It turns out my wooded lot is mostly green ash trees, and they're all going to die from Emerald Ash Borer infestation unless I spend lots of money on annual pesticide injections.

EAB comes to us from China by way of Michigan-bound container ships, where they stowed away in wood packing material. The insect's territory increases about one-quarter mile per year on its own, but much faster if it is transported by humans in infested firewood.

Jodie Ellis, the exotic insects coordinator at Purdue University, says EAB has no native predators and may eventually kill



Ash tree at creation. Drawing courtesy of Sassafras at NativeRadio.com.

every ash tree in North America. I checked the infestation map. There is a documented infestation about five miles from our home!

I had to find a way to convert lemons to lemonade.

Around this time, I got involved with the Geist Watershed Alliance, a nonprofit group dedicated to improving water resources in the Upper Fall Creek/Geist Watershed. The folks involved taught me how land management impacts the quality of our water and the important role native plants play in the urban landscape.

The Hamilton County Soil and Water Conservation District, an advisory group for the Alliance, offered to assess our property and recommend how we could minimize our land's impact on the watershed and restore native habitat. They invited me to apply for a grant to help fund the initiative, called Backyard Conservation. I was hooked.

For the next several months, I learned everything I could about gardening, native plants, rain gardens, and landscape design. By early spring 2010 we broke ground.

to Native Plants

Matthew Newell, Self-described Amateur Gardener

My approach to landscaping is similar to a hairstyle called the mullet: business in the front, party in the back.

In the back yard, my wife gave me free reign to install a prairie and plant several small native trees I got from the Department of Natural Resources. We hired a designer for the rain gardens and sought advice from many different sources on species selection and installation. I dug long trenches from my gutter downspouts and redirected them into the rain gardens. I made tons of mistakes and recovered from most of them.

The front yard was a different story. Curb appeal was a priority. We have tight edges and mulched beds, and a pretty green lawn (or mostly lawn). It was important

for us—no doubt for the native plant movement in general—not to appear too unconventional from the street.

We hired a professional designer experienced with native plants (and an INPAWS member) to design our foreground elements. I was demoted to unskilled labor.

Wendy, our designer, plant consultant, project manager, and marriage counselor, assembled a plan that exceeded our expectations. With her oversight, we planted a stunning spread of swamp white oak, serviceberry, bayberry, red twig dogwood, viburnum, oakleaf hydrangea, black gum, and bald cypress. Most everything was native and selected based on location, function, wildlife value, and seasonal interest. The big specimens came in bur-

lap-wrapped, saturated clay soil. My back didn't particularly enjoy the installation, but I was confident the trees would thrive in their new clay home.

The diversification of our ash-dominant forest had begun.

We are proud of our wildlife- and watershed-friendly landscape and hope to share it with INPAWS and the public at next year's garden tour. Indiana is a fascinating place (I tell my California friends it's an acquired taste), and I'm thrilled to be part of an organization that is dedicated to restoring our native heritage and, perhaps serendipitously, also preserving our water resources.

Thank you for having me as a member.



The Newells' wooded lot, chock full of stately ash trees. Photo by the author.

Matt Newell blogs about gardening, watersheds, food, family, and friends at www.urbanrenewell.com. He thanks his landscaping advisors Dan McCord, Hamilton County Urban Conservation Association; George Peregrim, Native Plants Unlimited;

Myrene Brown, Myrene's Gardening Service; Shaena Reinhart, formerly of the Hamilton County SWCD; Steve Mayer, Purdue Master Gardeners; and Wendy Ford, Landscape Fancies.

Youth Outreach Update

The other day, as I walked out of Costco, I encountered a mother with two toddlers attempting to rescue a praying mantis from certain destruction in the parking lot. She asked if I'd help by getting "him" to the safety of a nearby shrub.

I was encouraged to see this mother modeling concern for a creature that could have been ignored by her youngsters or worse, a target of destruction. That insect was important. What a wonderful lesson for the children, and for the other adults nearby. These are the hoped-for happenings when children are attentive to and respectful of their environment, wherever they happen to be.

Renewed Emphasis on Fundraising

Youth Outreach's goal, through Letha's Youth Outdoors Fund, is to address barriers that keep children from having positive, environmentally sensitive experiences with the natural world. So far this year, ten grants have been funded, impacting over 1,700 youth. We are pleased that we have been able to award grants in eight counties: Kosciusko, Hancock, Hamilton, Elkhart, Allen, Vanderburgh, and Marion.

More applications have been received this year than in all previous years of the Fund. Youth Outreach is developing fundraising strategies to support the growth of these very effective educational experiences that schools or youth-serving organizations cannot support on their own.

Some Activities Made Possible by Letha's Fund

Explore Nature (Ft. Wayne): an innovative, research-based project that promotes lifelong environmental literacy for 420 students and their teachers. It encompasses the school year, with field trips led by environmental educators. Plus it develops sites on the school grounds where children can daily appreciate what is happening in their own "backyard." The PTO and a local foundation pooled funding to help support this endeavor.

Glenwood Leadership Academy (Evansville): a six-week program that targets inner-city children through outdoor activities in the Eagle Slough Natural Area, led by an experienced environmental educator. This program begins October 4 and continues for the following six Tuesdays. INPAWS members have been invited to observe any of these after-school programs, which begin at 3:00 p.m. at the school. To participate, contact Greg Meyer at meyer@msslegal.com. You may be inspired!

Youth-Focused Breakout Sessions at AC2011

Youth Outreach will offer breakout sessions at the INPAWS Annual Conference to assist teachers, youth leaders, parents, and grandparents with ways and means to expose children to things they took for granted as a child: mud puddles, worms, caterpillars, wildflowers. Using a "Gallery Walk," attendees may browse displays of successful grants and programs. Then they'll learn how to apply for funds, and how to navigate the new INPAWS website to ease their research.

Please help to continue the support for effective programs that inspire and connect children with their natural world. Make a donation or honor someone special with a contribution to Letha's Youth Outdoors Fund.

—Cheryl Shearer, Chair, Youth Outreach

To Make a Donation

Mail a check to INPAWS, PO Box 30317, Indianapolis, IN 46230-0317, designating it for "Letha's Fund."

Letha's Youth Outdoors Fund was developed in honor of Letha Queisser, Indiana's "wildflower lady" and a dedicated environmental educator, who wisely matched jelly bean treats to the colors of wildflowers children found, igniting in them an interest in the natural world.

Small But Mighty, West Central Chapter Gets A Lot Done

With just over 50 members, and even fewer than that active, the West Central Chapter of INPAWS does a lot for a group its size. The chapter's bi-monthly newsletter is always jam-packed with upcoming activities that people of all ages and experience levels can participate in.

One of the most popular is the RIP (Remove Invasive Plants) Squad, led by veteran weed puller and long-time chapter member Joan Mohr Samuels. Every season Mohr Samuels conducts RIP Squad training, then organizes attacks on various invasive species at the appropriate times. The RIP Squad regularly destroys masses of purple loosestrife, garlic mustard, and other invaders. A spinoff, the RIP (Rescue Indiana Plants) Squad, is just getting underway and will organize native plant and seed rescue events.

On the fourth Monday of the month, for nine months out of the year, the chapter meets in West Lafayette with vibrant speakers on native plants. Chapter members also participate in community-sponsored nature workshops such as Wednesdays in the Wild, Purdue Butterfly Encounter, Master Naturalist training, and the Tippecanoe County Children's Garden as well as INPAWS' spring plant sale and fall conference.

WC-INPAWS's annual fundraiser is a large native plant booth at the Tippecanoe Garden Expo every spring. Members donate plants from their own property which are sold to Expo shoppers.



West Central Chapter member and McCutcheon High School teacher Mickey Penrod celebrates her catch at the annual Butterfly Encounter held this year at the tallgrass prairie at Prophetstown State Park.

The chapter also uses this well-attended event to educate people on the benefits of landscaping with natives.

Several native plant nurseries and preserves also are run by chapter members, and these proprietors are an ever-ready source of information, enthusiasm, plant materials, and venues for hosting native plant excursions for chapter members, community groups, and the public.

We welcome visitors and speakers from other INPAWS chapters. To arrange a visit, contact chapter leader Reni Winter at 765-714-4288.

SW-INPAWS to the Rescue!

INPAWS' Southwest Chapter may be the new kid on the block, but their Plant Rescue Team led by Kathy Eicher has already been busy.

On Saturday, April 2, 2011, the Team gathered at the University of Southern Indiana/Burdette Bicycle Path construction site south of Broadway Avenue in Evansville. A second team worked on the project the following week.

The goal was to save some of the woodland wildflowers in the path of destruction, which included a 50-foot wide by at least one mile long swath of oak-hickory forest. Actions involved moving as many native spring ephemerals as feasible to areas outside the marked limits of the path so they could safely thrive alongside the construction zone.

The most abundant species appearing at that time were Dutchman's breeches (*Dicentra cucullaria*) and squirrel corn (*Dicentra canadensis*), too numerous to save all plants. Other species included prairie trillium (*Trillium recurvatum*), fragile fern (*Cystopteris protrusa*), white baneberry or "doll's eyes" (*Actaea pachypoda*), blue phlox (*Phlox divaricata*), puttyroot (*Aplectrum hyemale*), cranefly orchid (*Tipularia discolor*), cutleaved toothwort (*Dentaria laciniata*), spring beauty (*Claytonia virginica*), and

ebony spleenwort (*Asplenium platyneuron*). Some unidentifiable woodland asters were also moved.

For this first rescue, the Plant Rescue Team felt like they accomplished something worthwhile. Next year will tell! All the plants were flagged and may be checked in the spring for success in transplanting.

Rescue participants at USI were Carolyn Barron, Alex Damman, Pam and Deron Drach, Barbara Dye, Don Fleming, Harlen Gorman, Mike and Kay Haller, Carol Pettys, Jane Magary, Dennis Slow, and Tom Virgin.

On Saturday July 23, 2011, the Team sprang into action again at the residence of Richard and Marilyn Mourdock in Darmstadt, Indiana. Hot and humid as it was, the nine rescuers managed to pot up trays full of at least ten species of woodlanders growing in the Mourdocks' garden pathways.

Species rescued included: pale or cream violet, dwarf crested iris, early spiderwort, tall bellflower, Virginia waterleaf, celandine poppy, swamp mallow, yellow passion flower, blue mistflower, a woodland sunflower, and more. The plants were taken home for foster care until a Swap and Share could be organized this fall for the members.

Participating in the Darmstadt rescue were Pam and Deron Drach, Marilyn Mourdock, Davie Sue Wallace, Kathy Eicher, Heath Hamilton, Carol Pettys, Mel Lodato, and Kay Haller.

What's All This Fuss about Corridors?



Corridors are physical connections between disconnected fragments of plant and animal habitat.

A corridor can be as big as a swath of river and forest miles wide that links two national parks, or as small as a tunnel under an interstate highway.

Without such connections, animals cannot travel to food, water, mates, and shelter. Plants cannot disperse their pollen and seeds to maintain healthy, genetically diverse populations.

Matthew Holland et al., quoted at Science Daily.com 10/28/08

To Register

Look for the registration brochure in your mail or download it from www.inpaws.org.

Remember, if you register by October 22, you'll qualify for the discounted fee.

And while you're at it, why not renew your INPAWS membership? The registration form makes it easy to do that too.

"Connectivity & Corridors" is the theme of this year's INPAWS Annual Conference at University of Indianapolis.

Evidence is mounting that the loss and fragmentation of habitat is the largest threat to biodiversity globally.

But scientists are also proving that, when landscape corridors connect isolated patches of habitat, they are lifelines for the native plants that live there. Where corridors exist, pollination by wind and pollinators is enhanced and seed transport by mammals occurs more readily, promoting species survival.

Gardeners and scientists alike can thus use corridors as a powerful tool for conserving biodiversity.

Doug Tallamy tells us that in the US, we have forty million acres of lawn, which does not sustain much of anything. If we converted just half of our lawns to function as corridors, think what good we could do!

Come explore this and related topics with fellow members and the public at Ulndy on Saturday, November 12, and enjoy a day of sociability and learning.

What's In Store

Dr. Clinton Jenkins

He's the coauthor of *Applying Nature's Design: Corridors as a Strategy for Biodiversity Conservation*. As Principal Research Scholar in the Department of Biology, North Carolina State University, he's been studying issues, cases, and methods in biodiversity conservation with a focus on the socioeconomic aspects of getting communities to think about corridors. His findings will give you lots to think about.

Jennifer Hopwood

She's the Midwest Pollinator Outreach Coordinator with the Xerces Society for Invertebrate Conservation. Her presentation will bring to light the critical role of native pollinators in the conservation of biodiversity. Plus she'll tell you how you

can lure them to your functioning backyard corridor.

Cliff Chapman

He heads up the Greening the Crossroads initiative for Central Indiana Land Trust. Cliff will talk about how CILTI has enlisted the community in creating a science-based, landscape-scale strategic conservation vision for central Indiana. Learn how this green infrastructure project seeks to create a happy ending for Joe the Boxturtle in his quest for a mate.

Inspiration Workshops

Designed for educators, youth workers, parents, grandparents, and other adults who want to stimulate a curiosity in children about what is right outside their doors. Letha's Youth Outdoors Fund grantees will share plans, materials, resources, and outcomes of their outdoor experiences.

These are just the program highlights. See details at www.inpaws.org.

TRIP REPORT

Forest Wildflower Hike at the University of Southern Indiana

David and Jane Savage, Hikers & Conservation Advocates

Mike Homoya

Our state botanist/plant ecologist and author of *Orchids of Indiana*, Mike will share the highlights of his latest field guide, *Wildflowers and Ferns of Indiana Forests*, and will sign copies hot off the press.

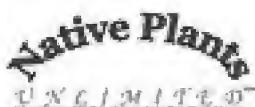
Kevin Tungesvick

INPAWS' go-to guy for all things relating to growing native plants, Kevin will guide you in selecting plants that will thrive in your site conditions. Learn about native plant communities that can help your backyard function as a corridor.

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As the thunder crashed and the lightning flashed and the water came tumbling down, we thought we had just wasted four hours driving from Nashville to the University of Southern Indiana for the April 9 INPAWS hike.

Our destination was a University woodland property just west of Evansville with rolling hills of sugar maple; white, red and black oak; and wildflowers. We could at least, we thought, see the University campus. But as we neared the meeting place the rain stopped, the clouds cleared away, and the sun came out as we and ten other wildflower enthusiasts were greeted by hike leader and INPAWS member Dr. Edie Hardcastle of the Biology Department. The USI Nature Preserve Committee is looking at this area as a possible nature preserve for teaching and research at the University.

The woodland floor, a treasure of wildflowers, was carpeted with spring beauty along with wild blue phlox, dwarf larkspur, golden seal, toothwort, trillium, solomon seal, spleenwort, putty root, blood root, wild iris, Dutchman's britches, waterleaf, doll's eye, bluebells, Jack-in-the-pulpit, May apple, yellow violets, Virginia bluebells, and the foliage of a native orchid. Christmas fern,

club moss, spice bush, dogwood, and redbud were also noteworthy.

We found morel mushrooms. Three box turtles were resting very close together, one covered with a light film of soil, having just emerged from hibernation. Unfortunately we also encountered some nasty invasives, namely, autumn olive, bush honeysuckle, mulitflora rose, and garlic mustard.

This area of Vanderburg County, just west of Evansville, has a special microclimate due to its proximity to the Ohio and Wabash Rivers. The productive soil derives from the Mississippi flood plain unspoiled by glacial action.



INPAWS hikes are a great way to see special, natural places in Indiana, with knowledgeable leaders to add information about an area and enhance our appreciation of its beauty. INPAWS hikes also attract interesting people.

Hikers were Tom and Linda Good from Sullivan, Jane and David Savage from Brown County, and, from the Evansville area, Edie Hardcastle, Richard Kuhn and Dona Bergman, Harlen Gorman, Kim Winterheimer, Barbara and Frank Dye, and Davie Sue Wallace.



www.judymurphyart.com

FIELD NOTES

INPAWS Garden Tour Provides Outreach Benefit

Despite the brutal heat on Saturday, July 9, the turnout for INPAWS' second public garden tour was robust. The four tour sites on the northside of Indianapolis attracted 145 visitors, including grade-schoolers. Among the visitors, 78 were not INPAWS members, a sign that the garden tour is a prime outreach tool to the gardening community.

Visitors were very appreciative of the gardens. The tour was a bit more educational this year, with two garden owners providing detailed handouts. After this third successful run (the first tour was members-only), the garden tour is picking up steam, as evidenced by the fact that garden owners are now asking to be on the tour. INPAWS thanks everyone who visited the gardens, the volunteer garden hosts, and especially the owners who labored to prepare their gardens for public viewing.

One correction: A tall coneflower at the church was mislabeled gray headed coneflower (*Ratibida pinnata*). The dogged botanizers among us have identified it as prairie coneflower or long-headed coneflower (*Ratibida columnifera*), which is not native to Indiana. The two are very similar.



Prairie coneflower. Photo by Tom Hohman.

Help on the Way for Would-Be Native Plant Gardeners

A new book soon to roll off the presses is *The Midwestern Native Garden: Native Alternatives to Nonnative Flowers and Plants, an Illustrated Guide* by Charlotte Adelman and Bernard Schwartz, from Ohio University's Swallow Press.

In this first book of its kind to focus on the Midwest, the authors suggest how to replace specific nonnative plants with specific native plants of similar appearance and growing requirements. They also indicate the country of origin of nonnative plants, state whether they are invasive or naturalized, and note whether they are butterfly hosts or attract pollinators or nectar feeders.

Watch for a review of this promising book in the next issue of INPAWS Journal.

News from the Membership Committee

INPAWS boasts 501 member families, encompassing more than 600 individuals. A renewal reminder sent in July tried to corral the 107 members in 2010 who had not renewed yet.

Amy Perry, who has taken over the reins from long-time membership chair Mark Outcault, has recruited two new committee members. Rosemary Ervin is tasked with resolving undeliverable emails. Karen LaMere assists with mailings.

Doug Tallamy Now on Video

Thanks to a recording shared with us (with permission!) by the Florida Native Plant Society, we have an opportunity to distribute DVDs of a Doug Tallamy talk similar to the one delivered at the 2008 INPAWS Annual Conference and at Butler University in November 2009.

The DVDs are available for \$3 shipping and handling by request to info@inpaws.org. Please spread the word to your local garden clubs, extension offices, and gardening friends.

Children's Outdoor Bill of Rights

An email request from Ginger Murphy with the Division of State Parks and Reservoirs alerted the INPAWS Council to an initiative in conjunction with the National Association of State Park Directors (NASPD) and other states to develop an Indiana Children's Outdoor Bill of Rights.

The aim is to create a document that everyone can support, publicize, and use across Indiana to say we believe that every child has the right to explore the outdoors in a variety of ways.

Support will be sought from Governor Daniels to release this list when it is finalized, and any publicity associated with it will include the supporting organizations and agencies.

At the time of the request, the draft list of rights read as follows.

We believe that all Indiana children are entitled to experience these activities in the outdoors, regardless of ability:

- 1. Explore and play outdoors in a safe place.**
- 2. Follow a trail and discover native plants, wildlife, and history.**
- 3. Splash and swim in clean streams, lakes, and ponds.**
- 4. Enjoy traditional outdoor activities like fishing or hunting.**
- 5. Discover and celebrate Indiana's past.**
- 6. Camp out under the stars.**
- 7. Climb a tree, for real or pretend.**
- 8. Visit a farm, and plant a seed or a tree and watch it grow.**
- 9. Experience the outdoors using all the senses.**
- 10. Ask lots of questions, find answers, and share nature with a friend.**

President Tom Hohman polled the INPAWS Council and got the go-ahead to sign on in support of the initiative.

FIELD NOTES

Best Time to Renew Your INPAWS Membership? NOW!

When you sign up for AC2011, that's the ideal moment to take care of this other little detail so you won't be left wondering whether you renewed or not. There is a place on the Annual Conference brochure to indicate that you are joining INPAWS or renewing your membership. Mark it yes and send your membership dues along with the conference fee. You'll only have to take out your checkbook once, and you can relax knowing that your membership is up to date until the next Annual Conference.

If, despite our exhortations, you neglect to renew while registering for AC2011, look for membership renewal information at inpaws.org or email membership@inpaws.org.

Plants in the Wrong Places

Kudos to the Trustee of Clay Township, Hamilton County, Indiana, for taking the initiative to create a video for his constituents to identify weeds and invasive plants in their gardens and neighborhoods.

Trustee Doug Callahan enlisted the help of our own Hilary Cox and Ellen Jacquot to serve as expert hosts as the film crew explored the variety of plants found by turns in home gardens, old cemeteries, and parks.

Watch the entire video or enjoy clips on specific topics at www.plantsinthewrongplaces.com.

Coming Up

Saturday, October 15

INPAWS Hike Morgan-Monroe State Forest, Sweedy Hollow Nature Preserve, Monroe County. Led by John Bacone.

Saturday, November 12

AC2011 INPAWS Annual Conference: Connectivity & Corridors. University of Indianapolis.

Watch for announcements of INPAWS events and field trips in the mail, via email, and at INPAWS.org.



Goldfinches on *Liatris*. Illustration by Chris Carlson.



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THE LAST WORD

An Aptitude for Names

Patricia Happel Cornwell, aka Flowerfeet

I have a confession to make: I have an aptonym fetish. I collect them. I see them everywhere I go. They follow me home and I keep them in a blue envelope in my desk. I don't know what to do with them, but I can't resist them.

An aptonym is a surname that is the same as, or related to, a person's profession.

Long ago, people were actually named for what they did. A Mason was a stone craftsman. A Cooper was a barrel-maker. A Smith was a metal worker. Through the centuries, members of families no longer practiced their ancestors' trades, but kept their names. I know a Mason who is an attorney, a Cooper who is a massage therapist. My cousin is a Banker, but she's not a banker. My husband John's uncle was a Cooper, but he was not a barrel-maker. No, he was an accountant—serendipitously, for a distillery.

Yet it is curious in this day and age, when one's trade no longer determines one's name, that many people's names do reflect their lines of work.

There is Francine Prose, author and writing instructor. Margaret Hamburger is director of the Food and Drug Administration. Bernard Word Anderson is a renowned Biblical scholar. How about Steven Saint, a missionary in South America? Kathleen Plate, glass artist? There are doctors in Southern Indiana named Akin (achin', get it?), Grief, and Payne. Jody Swimmer is a personal trainer who owns a fitness gym in Louisville. Going back in time, Air Force captain Raymond Wool was head of mili-

tary clothing procurement in 1955, and Joseph Bloodgood was an oncology surgeon at Johns Hopkins in the 1890s.

A few years ago, my nephew married a girl whose last name was Cook. She promptly opened a restaurant!

The nature-related aptonyms are the most fun. Phil Bloom is editor of DNR's *Outdoor Indiana*. Richard Fields was once their photography editor. Richie Farmer was head of Kentucky's Department of Agriculture. Bob Lily is a gardening consultant in Washington State. Mary Root was head of the IMA Horticultural Society. *Deerproofing Your Garden* was written by Rhonda Hart. Sherry Crabtree researches blackberries and paw paws at Kentucky State University. (Leafing through an INPAWS directory, I found members named Creek, Hill, Mow, and Park.)

Bud Starling wrote a birding column for the *Indianapolis Star*. David Bird is a columnist for *BirdWatchers Digest*. Jeff Bird developed 1,200 acres in South Dakota as a pheasant-hunting habitat.

Josh Rose is a natural resource specialist in Bentsen-Rio Grande Valley State Park, and Mark Fisher is science director at the Texas Parks and Wildlife Department's marine laboratory. Keith Mountain is Kentucky's state geographer and chair of the University of Louisville's geosciences department. In Canada, Boris Worm is professor of biology at Dalhousie University.

My all-time favorite aptonym is Richard Firestone, the geologist who theorized that a fiery comet struck the earth 12,900 years ago, causing extinction of the Clovis culture of North America.

Is it possible that the name a person is born with can channel him or her into a career that matches that name? Is it coincidence, fate, the power of suggestion? Are these people even

aware of the affinity of their names and professions?

First names can be predictive, too. Wren Smith is a naturalist at Bernheim Forest in Kentucky. Was it inevitable? Avian artist Julie Zickefoose named her daughter Phoebe for the beloved little bird that annually nests under her deck. What profession is Phoebe (whose father is *BirdWatchers Digest* editor Bill Thompson III) destined to pursue?

What about those of us whose family names have morphed over centuries until they are today meaningless? I suspect some of us attempt to remedy this disparity by our choice of email monikers. Mine is "Flowerfeet," with a nod to a Steinbeck character. After getting a psychology degree, our daughter slipped "Freudian" into her email address.

I have a friend whose screen name is "Birdfeeder" and another, a violinist, who goes by "Fiddler." A priest friend who ministers to Latinos incorporates "Padre" in his screen name. A woman who is a spiritual director makes "Angel" part of hers. Two teens, a brother and sister, go by "Bears Fan" and "Soccer Chick" online.

What name would you choose, if you could choose? How apt would it be?



Graphic courtesy of Ron Jon Surf Shop.



Brown County Saga

The Burdensome Harvest of Good Intentions

Since introducing various “recommended” plants on his Brown County farm more than 25 years ago, and having gardened and farmed organically there for some 40 years, Dave Richards has had to develop a strategy to control, if not eradicate, the many exotics now invading his land. Here is how he arrived at this point—how many US landowners could tell a similar tale?—and how he is coping.

Many years ago when I managed several bee hives, a respected apiarist, Albert Thomas, who operated a honey and bee supply store in Indianapolis, recommended that I plant bush honeysuckle as an “excellent” source of nectar for honeybees.

About the same time, I had agreed to a farm and wildlife management plan with the office of the local Brown County Agricultural, Stabilization, and Conservation Service. ASCS recommended that I plant several varieties of lespedeza (Asian) for both wildlife and erosion control. They also informed me that the state DNR nursery at Vallonia had “wildlife packets” consisting of 25 autumn olive and 25 bush honeysuckles at a very reasonable price. The State Wildlife Biologist also recommended that I plant these Asian beauties, which I gladly did! I remember inquiring whether these plants might somehow spread by seed or bird dispersal. Both the ASCS and wildlife biologist denied that this was a possibility!!

When I had my first pond built, ASCS said that it was necessary to plant crown vetch to control erosion on both the dam and other disturbed areas.

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Illustration courtesy truthcontrol.com

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INPAWS Mission

To promote the appreciation, preservation, conservation, utilization and scientific study of the flora native to Indiana and to educate the public about the value, beauty, diversity, and environmental importance of indigenous vegetation.

Membership

INPAWS is a not-for-profit 501(c)(3) organization open to the public. For membership information, visit www.inpaws.org.

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Information to be shared with INPAWS members may be directed to membership@inpaws.org.

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PRESIDENT'S MESSAGE

A Retrospective

By the time you receive this issue of *INPAWS Journal*, my term as INPAWS president will have come to an end. It has been an exciting two years during which my enthusiasm for INPAWS as an organization has grown.

As an all-volunteer enterprise, INPAWS is heavily dependent on its members. I have been constantly amazed by the willingness of INPAWS members to devote countless hours promoting native plants. This is true whether they are a Council member, giving time on a year-long basis, or are helping with one task that they have been recruited for.

The successes of INPAWS are due to the efforts of all these many volunteers. With this in mind, I want to look back on some of those successes during the last two years.

- **A new local chapter was formed in southwest Indiana**, and has quickly become one of our most active chapters. INPAWS membership in those nine counties grew from 11 in June 2010 to 64 by November 2011. My thanks to the officers and members in that area who have made this possible.

- **The INPAWS website has been revamped and modernized**. Although we had some help from outside INPAWS in designing the site, a huge amount of volunteer time was put into moving that design in the right direction and populating the pages with information and photos. If you have not yet seen the new site, please check it out (www.inpaws.org).

- **We brought the message of Doug Tallamy back to Indiana**, this time including areas outside central Indiana that had not had an opportunity to hear him. We were the prime sponsor for his return engagement to Indianapolis, speaking on a new topic, the importance of biodiversity corridors. We also were the prime sponsor for engagements in Ft. Wayne and South Bend. While we were not the lead sponsor for his presentation in Evansville, we were a supporting sponsor.

- **Letha's Fund for connecting kids with nature has grown** to the point where last year they were able to fund 12 trips or projects that gave 1,400 children an opportunity for a close encounter with nature. This is an initiative that I have a special interest in and am thrilled to watch grow.

- **We have expanded partnerships** with several organizations critical to our mission of promoting native plants. One such organization is the Indiana Chapter of the American Society of Landscape Architects (INASLA). In addition to an annual award for a project including native plants that INPAWS has sponsored for many years, each organization is now a sponsor of the other's annual conference. INPAWS also offers continuing education credits for professional landscape architects attending our conference. In a new initiative for which the details are still being finalized, we hope to work with one of the state landscape architecture schools to incorporate native plant information in the curriculum.

- **We increased the funding available for our Small Grants program**. We now make available approximately \$2,000 each year for many worthwhile projects around the state.



Tom Hohman at Prophetstown Fen, September 2010. Photo by Wendy Ford.

As I look back on my two years as president, I am happy to turn over the reins to my successor, Art Hopkins, with full confidence that he will have the same support from INPAWS members that I had. I'm also looking forward to helping in other ways, both on the state level and with my local chapter. Maybe now I will have more time to spend getting my hands dirty, digging plants for the annual plant sale, and getting rid of invasives in local natural areas.

—Tom Hohman

Did You Renew?

If you neglected to renew your INPAWS membership in the fall, do it now so you get a full year of membership benefits. Keep those event notices and *INPAWS Journal* coming to your mailbox and support our mission of education and conservation.

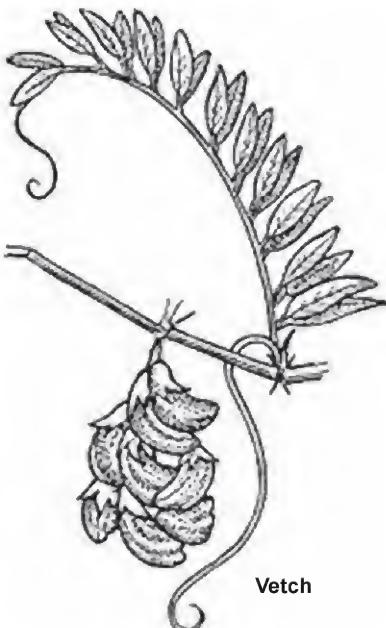
Look for membership renewal information at inpaws.org or e-mail membership@inpaws.org.

Burdensome

continued from page 1

Following their recommendation, I planted this legume that also turned out to be invasive. Multiflora rose was already on the property from previous landowners.

Today, I am reaping the "benefits" of my past actions to improve habitat for wildlife and stop erosion!



Vetch

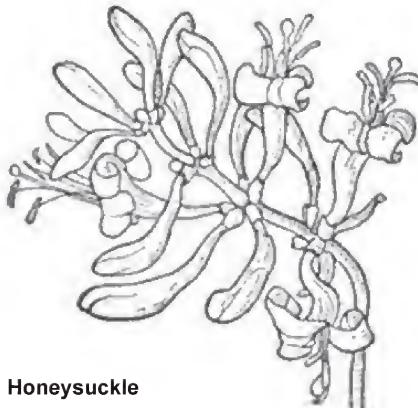
Here is my approach to solving the problem that I created many years ago:

First, I located all of the older bush honeysuckle and autumn olive shrubs, many of which were 10-15 inches in diameter, and used a chain saw to saw them off near the ground. The plants with a smaller diameter were pruned near the ground, the goal being to prevent these shrubs from forming any new seeds.

The second and third years, the same plants were pruned both spring and fall as they as they began to sprout.

Both honeysuckle and autumn olive stay green well into November and emerge very early, sometimes in March. This characteristic helps me to locate them during the colder months, as they are the only green plants in the woods and fields.

Bush honeysuckle can be pulled early in the spring if the ground is wet and the stem is less than 2 inches in diameter. Pull very slowly and steadily in order to get all of the roots as they spread some distance from the plant. Don't try this with autumn olive unless it is very small.



Honeysuckle

Gradually, these invasives will lose some of their vigor and will be replaced by native plants such as elderberry, wild jewelweed, pokeweed, spicebush and young tree saplings such as red maple, sumac, and sassafras.

Over the last few years I have been planting native shrubs such as pawpaw, persimmon, hazelnut, ninebark, and crabapple in infested areas. About 50% of the native shrubs have survived the recent droughts.

The crown vetch has spread into some of my pastureland but is not a major problem if mowed annually. This actually improves the soil and provides additional protein to the hay.

Locating and pruning back invasives provides good exercise and keeps me aware of what's going on in my forests and pastures.

Good luck in your invasive species control efforts!

Autumn olive



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Dave Richards is a board member of the Brown County Native Woodlands Project, whose mission is to protect the forests of the Brown County Hills from the devastating effects of invasive plant species through education, training, and eradication of nonnative invasive plants. This article is adapted from the Project's newsletter, October 2011.

A Visual Treat Packed with Information

A review of The Midwestern Native Garden: Native Alternatives to Nonnative Flowers and Plants, by Charlotte Adelman & Bernard L. Schwartz. Athens, Ohio: Ohio University Press, 2011.

Nancy Hill, Avid Gardener

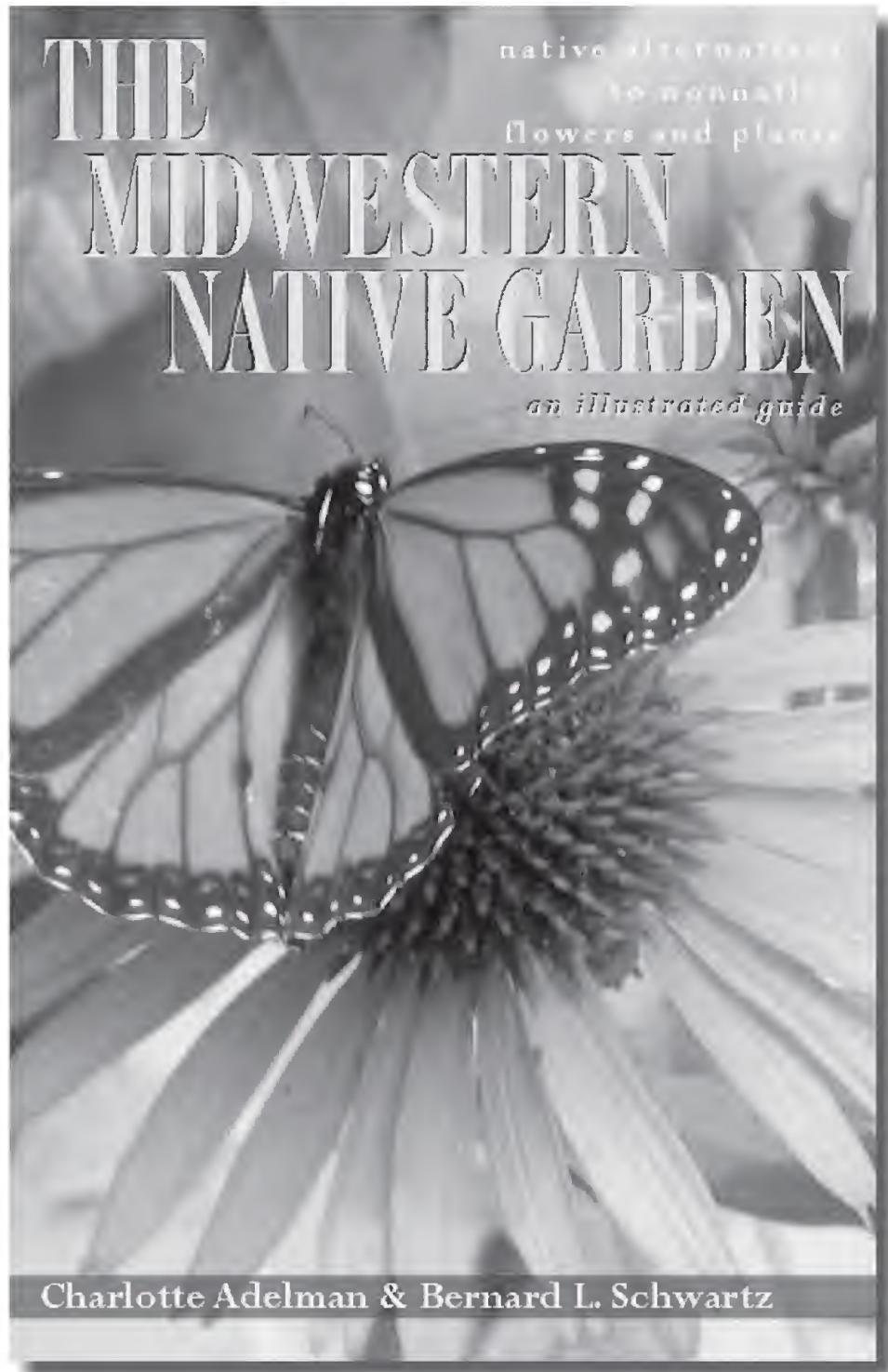
Our INPAWS book sales offer scores of books on native plants. I have many of them on my own bookshelves, since the only thing I like to buy as much as plants is books. So when I saw this title, it was hard for me to imagine what ground had not already been covered. Adelman and Schwartz have found a niche, however, and give us a treasure of information that is a treat as both science and art.

Categorized under spring, summer, and fall, the authors list nonnative garden plants. A typical entry has origin, height, cultivation, ornamental attributes, and often a reason not to plant it. For example, the nonnative butterfly bush is acknowledged as a nectar plant, but "Not one species of butterfly in North America can use buddleias as larval host plants."

For each nonnative, they list native alternatives, based on height, appearance, and growth conditions. The native Joe Pye weed, they say, is an excellent nectar source and in addition hosts "over three dozen species of Lepidoptera." They also suggest planting dogbane, Indian hemp, meadowsweet, buttonbush, false indigo, New Jersey tea, elderberry, or leadplant and tell us what butterflies, moths, bees, wasps, beetles, and birds use them for reproduction, food, or cover.

The visual presentation of this book is superb. For example, the authors tell us that fragrant sumac (*Rhus aromatica*) is a good ground cover alternative to the invasive, nonnative English ivy. There is a nice picture of both. *R. aromatica* is a host plant for the red-banded hairstreak (pretty photo of the hairstreak). Further, the sumac's fruits "provide eastern bluebirds and other bird species with emergency food during the winter," and there is a gorgeous early 1900's illustration of the eastern bluebird by Louis Agassiz Fuertes, a noted Cornell ornithologist and illustrator.

More than a dozen of Fuertes' richly colored illustrations enrich the book, along



Charlotte Adelman & Bernard L. Schwartz

with eighty-two photographs of butterflies and moths, caterpillars, and hundreds of photos of plants, including many beautiful old illustrations. Kudos to the authors for mixing useful, accurate photos with lush vintage illustrations.

Every plant is listed with its scientific name. This is often critical. The authors present the nonnative "sweet autumn virgin's bower" and say its native alternative is "virgin's bower clematis."

Avoid the former: *Clematis terniflora* and plant the latter: *Clematis virginiana*. Great information when reading plant tags.

I am a Doug Tallamy convert. I love knowing that the New Jersey tea I bought at the INPAWS plant sale last spring will be host to spring and summer azures, can attract at least thirteen butterfly species, will feed birds with their seeds and gather in small insects that hummingbirds feed to their young. Thus I

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IN MEMORIAM

Mark Outcalt 1935–2011

I always thought I'd see Mark Outcalt again. Everywhere I went connected with INPAWS—every hike, plant sale, Central Chapter event, Council meeting, annual conference—there he was, often accompanied by lovely Helen Harlan, his long-time companion. Then suddenly he was absent, struck down by a series of strokes, languishing in a hospital, not well enough to see visitors.

When I learned Mark had passed away several months later, I was sad for Helen, sad for myself, and sad for INPAWS, for in countless ways Mark was the go-to guy to get things done for the organization.

Officially, Mark was our long-time Membership Chair, and Secretary/Treasurer of INPAWS Central Chapter. But he did so much more. When I came on the Council as Journal Editor, Mark was there with business cards and a name tag for me to wear in Council meetings. When the Journal went to press, it was Mark who furnished an updated mailing list to the printer, who sent me a list of the new members to welcome, and who furnished extra copies of the Journal to the authors upon request.

I soon learned it was also Mark who got those pastel postcards printed, labeled and sent to tell us of upcoming INPAWS events. It was Mark who took Annual Conference registrations, organized the registration volunteers, and stuffed folders for the participants. And who was it that made regular trips to the INPAWS PO Box to collect membership checks, log them in, and send them to the Treasurer? Who else but Mark?

With all he did for INPAWS, it's hard to imagine Mark had time for anything else. But when I chanced to drop off some Annual Conference handouts once, I learned of another consuming interest he shared with Helen—the welfare of feral cats. A whole clan of homeless felines were cared for at the couple's Rocky Ripple abode.

There was so much else to know about Mark that came as a surprise when I read his obituary in the *Indianapolis Star*: A graduate of the University of Michigan, he received his doctorate from Purdue University, was Assistant Professor of Chemistry at the Indianapolis Campus and then pursued a career as a research chemist. We had mutual friends in his many circles, including the Marion County Master Gardner Association and the IMA Horticulture Society.

We have lost a great friend of INPAWS, a dedicated volunteer and active participant, a doer who worked harder behind the scenes than any of us will ever know. We miss you, Mark. —Wendy Ford

Contributions in memory of Mark Outcalt can be made to Indy Feral, Inc., at www.indyferal.org. IndyFeral seeks to reduce the stray and feral cat overpopulation through the non-lethal method of Trap-Neuter-Return (TNR).



Visual Treat

continued from page 5

totally agree with the premise of this book—that to promote biodiversity we need to plant more natives in our home gardens.

So how far do we take this premise? I have hundreds of native plants, but I am NEVER giving up my variegated Solomon's seal or my 'Tiger Eyes' sumac or 'Matrona' sedum. Therefore, I was a bit bothered by the absolutism of the book. The overall tone of the book is Good Plant/Bad Plant, with an assumption that every gardener's goal should be 100% native plants.

Europe and Asia are nearly dirty words, and most nonnative plants are described as "naturalized or invasive in the Midwest," leading me to feel that Jacob's ladder, wormwood (*Artemisia vulgaris*) and wisteria are going to take over the world. Okay, maybe the *Artemisia* would. But the authors, in so aggressively prosecuting all nonnatives, sacrifice the opportunity to educate us on what is truly invasive (to be avoided at all costs) and what is just nonnative.

Further, what is native? A plant native to one area of this book's large geographic area (Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri, Ohio, Wisconsin, and Ontario, Canada) is not necessarily native to another. The authors helpfully suggest accessing the USDA PLANTS data base for a specific plant's distribution.

Another quibble: I'm not sold on the organization of the book. When I'm thinking about changes or additions to my gardens, I don't say "I think I'll rip out that hosta and replace it with seersucker sedge or bottlebrush grass or northern sea oats. I take a more direct line. If I need a plant for a dry, shady spot, I pull out a native plant book and look at all natives that grow in those conditions, then choose based on leaf color, texture, and other design considerations.

Many nonnatives listed are the old-fashioned garden favorites—foxglove, hollyhock, peony, tulip, daylily, hosta, lavender, pinks, poppies, salvia, phlox, and roses. Every now and then, however, the format seems forced, as if the authors want to present a wonderful native plant and have to scrounge around for some nonnative to be its evil twin. Who plants the nonnative bishop's goutweed? I've been trying to get it out of my garden for twenty years! Or crownvetch? Or star of Bethlehem, which is that detestable wild-onion-like weed that needs to be dug out eight inches deep? I don't need an alternative for that one, native or not.

I am glad to own this book, even though I won't use it as the authors presumably intend. I will take pleasure in perusing the wealth of information on native plants that I now grow or want to grow, and I'll enjoy the insects and birds with whom I can now get acquainted thanks to the book's lovely pictures.

Nancy Hill, past INPAWS president, gardens in urban Indianapolis as well as rural Owen County.

The Mystifying Vanished Tamarack Bog



Male pine warbler (*Dendroica pinus*) in breeding plumage, perched on a tamarack branch.
Photo by Greg Schneider.

Last year, when my geologist-cartographer colleague and I were researching post-settlement influences in Eastern Great Marsh, one of our tasks was to resume the search for the site of the lost Tamarack Bog, once known to have existed, with its attendant cranberries, somewhere west of Fish Lake in Porter County's Pine Township. We failed. Here's why.

How do you lose a bog? Why try to find its remains?

Though the Indiana Dunes National Lakeshore had named a unit of the park after the Bog, no clue-furnishing tamaracks remained. If they didn't succumb to the 1927 drainage undertaken to establish the town of Beverly Shores, they succumbed in a two- to-three-year peat fire in the early 1950s. (I found the single remaining tamarack in the unit a few years ago, but it grows not in a bog but in the floodplain of a drainage ditch.) In 1928, geologist George B. Cressey noted that this quaking bog lay "just north of Tamarack on the Chicago, Lake Shore

& South Bend Railway...." That clue sounded helpful, but no map showed a town called Tamarack. However, there was a Tamarack Stop on what is now the Chicago, Shore & South Bend. What railroad records remain indicate the Stop's removal in the 1960s. So where was the Stop? At least five candidates exist for its location.

Before US 12 was constructed in 1922, early botanists like Charles Deam, the Reverend Marcus W. Lyon, Jr., and Father J.A. Nieuwland made their tantalizing discoveries after getting off at the Stop. Finding even one of their mouth-watering discoveries today would be more than gratifying. Among them: bogbean or buckbean (*Menyanthes trifoliata minor*), watch list; gold thread (*Coptis trifolia*), watch list; wild calla or water arum (*Calla palustris*), state endangered; bog arrow grass (*Scheuchzeria americana*), state endangered; and, most important, the boreal, small enchanter's nightshade (*Circaeal alpina*), state extirpated—and, of course, cranberry (*Vaccinium macrocarpon*).

In the early 1990s, another colleague and I, following various clues about the Stop's location, found a possible candidate for the bog with speckled alder (*Alnus rugosa*) and poison sumac (*Rhus vernix*) growing above carpets of golden ragwort (*Senecio aureus*), all accompanied by a dozen ragged fringed orchids (*Habenaria*, a.k.a. *Platanthera lacera*). Slogging through another possible candidate, we confirmed botanist Gerould Wilhelm's hypothesis that the golden saxifrage (*Chrysosplenium americanum*), state threatened, would show up there.

About three years ago, Noel Pavlovic, United States Geological Survey, found the accurate location of the Stop in section 9 of Pine Township.

Maps! Ah, maps! Our early botanists communicated orally, leaving no accounts of either acreage, extent, or location. Donald Culross Peattie's 1930 map placed Stop and Bog in the wrong county. Another map places a tamarack bog west of Fish Lake in Pine Township but is too imprecise to overlay on a more sophisticated map. As yet, we cannot get access to the earliest surveyor's maps, and the Lakeshore's library is undergoing transfer to a new location.

Excuses. Excuses. It's remarkable how slippery the records are. Ours is a "Phase I" or progress report. My colleague isn't sure just what Cressey's "just north" of Tamarack means. I myself incline to accept Cressey's statement and am willing to explore further here. Small enchanter's nightshade just might remain. My colleague thinks Peattie misplaced the county line rather than the Bog and Stop and that further examination of this map might accurately place the Bog. He also recommends using topographical maps to search the lowest spots north of the Stop. Soil samples might help.

We might even continue the search for free.

The Case of the Uncommon

Patricia Happel Cornwell, Master Naturalist

It was a cold, sunny day in late October. We had had a couple of good frosts, and it was time. I put on my old coat and the leather gloves with the hole in the tip of one forefinger and went looking for my shovel. Finally I was going to do one of those things I'm always "going to" do. I was going to sow a patch of milkweed from seeds harvested at my parents' farm.

My husband and I live in southern Harrison County, surrounded by cow pastures and rolling fields of corn and soybeans. Because we mow our property only once in spring and once in autumn, scores of wildflower species take refuge here, among them the lovely orange butterfly weed (*Asclepias tuberosa*). However, in 14 years not one common milkweed (*Asclepias syriaca*) has germinated on our 19 acres. Why?

The farmers around here are big on herbicides, pesticides—you name a “-cide,” they’ll use it. Consequently, there isn’t a single specimen of common milkweed in our part of the county.

On that bright fall day, I set out to remedy this sin of omission. The most time-consuming part was separating the milkweed seeds from their silky “kite tails.” I chose a slope at the edge of our woods, next to a heap of limestone boulders on which years of rain have revealed in bas relief a collection of antediluvian fossils. I turned the soil in a patch about four feet in diameter and scattered the flat, papery brown seeds on the open ground. For insurance against deer and mower traffic, I put a white wire flowerbed border around them and strewed a few leaves over them to camouflage them from the ever-hungry wild turkeys.

Common milkweed is a perennial that favors roadsides and old fields like ours. Its single downy stem can grow to six feet, bearing three- to four-inch drooping umbels of dusty lavender-pink blooms June through August. Its leaves are opposite, entire, and oblong. Like most of its sister species (but unlike butterfly weed), if cut or bruised it exudes milky white latex sap.



Seeds of *Asclepias syriaca* take to the wind. Common milkweed has become uncommon where pesticides are heavily used. Photo by Hilary Cox.

There are about 250 genera and 2,000 species of Asclepiads, most of them tropical and subtropical. Various field guides list altogether 14 species of milkweed found in Indiana. The Genus was named for Aesculapius, the Greek god of medicine, because native populations, including Native Americans and later European settlers, used parts of milkweed plants for everything from asthma, contraception, and pneumonia to ringworm, warts, and

wounds. Butterfly weed’s old-fashioned name is pleurisy root.

The repertoire of milkweed doesn’t stop there. Its young shoots have been eaten in salads and cooked like asparagus; the silky tufts that give wing to its seeds once filled life preservers, pillows, and mattresses; and its latex sap was used as both chewing gum and a substitute for rubber. Goldfinches (*Carduelis tristis*) plunder silk from milkweed pods to line their nests.

Common Milkweed

Milkweed's best-known customer, however, is not *Homo sapiens* or *Carduelis tristis*, but *Danaus plexippus*—the monarch butterfly. The foliage is the sole food of monarch larvae, and adults nectar on the flowers. The cardiac glycosides in milkweed make monarch larvae and adults toxic to birds and other predators. The plants provide a nursery for the young, nourishment for larvae and adults alike, and protection from their natural enemies. No milkweed, no monarchs.

Even if farmers weren't out to kill every plant they didn't plant, it's a wonder milkweed species survive at all. Their oddly constructed flowers may be their own worst enemy. Each flower, one-quarter to one-half inch long, has five down-curved petals around an elevated crown; each umbel of tiny flowers measures two to four inches across. Sacs of pollen snag on insects' legs and are pulled from the stamens, but they must then be inserted just so into slits behind the crown. If the insect gets it "wrong" and the pollen sacs go in backwards, those grains will not germinate. Some botanists conjecture that this is why most milkweeds produce many flowers but few seed pods.

A milkweed seed pod is like a sow's ear that contains a silk purse. When ripe, its rough spindle-shaped exterior splits down one side, exposing a snugly packed bed of white silk attached to scores of tiny brown, paper-like seeds. The wind teases out the fluff and sends the seeds sailing. The white tufts bring the term "angel hair" to mind, but they are a thousand times finer and lighter than the stuff people put on Christmas trees. These fibers spread out like a bridal train behind the seed and respond to the slightest whim of the wind.

After sowing my handful of milkweed seeds in the soil bed I had dug, I took out another pod and threw a handful of winged seeds into the air. I laughed out loud as they lingered momentarily around my head, then took flight. "Good luck!" I said.

Soon it will snow and tuck my milkweed seeds in till spring. Nothing to do now but wait.



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The Great Pretender

While writing this article, I was unable to identify a milkweed species that has eluded me for years. Everything about the plants is milkweed-like: long ovate entire leaves, umbels of tiny, greenish recurved flowers, fluff-filled pods, even milky sap. They look a lot like green milkweed, but the seed pods are very slender and the stems are red. So I emailed IDNR's Mike Homoya and Kay Yatskievych of Missouri Botanical Gardens.

They arrived at the same conclusion: It's not another milkweed species but hemp dogbane (*Apocynum cannabinum*), a.k.a. Indian hemp. Field guides make no mention of the distinctive red stem exhibited by the specimens in my field, and for good reason: not all hemp dogbane plants have red stems. The slender pods are a more reliable clue than stem color.

The dogbane family (Apocynaceae) is, at least, related to milkweed (Asclepiaceae) and includes such disparate kin as periwinkle (*Vinca minor*), *Amsonia*, and oleander.



A Near-Perfect Native Plant

Gene Bush, Munchkin Nursery

Creeping wintergreen, or *Gaultheria procumbens*, is as close to the perfect native plant as one will find in gardens from Canada to the Carolinas.

Almost every human sense is fulfilled just paying this plant a visit while walking through the garden. All twelve months of the year, the eyes are most certainly rewarded by lustrous leaves decorated in turn by tiny white flowers and red berries. The nose is rewarded by berries and foliage that exude a clean, fresh scent when crushed. Although wintergreen does not make an audible sound, it does say "holidays" as few plants can with its red and green theme during winter months. All five senses are combined to become that elusive



Creeping wintergreen glazed by a light frost. Photo by the author.

sive sixth sense rising to the experience of a Courier and Ives greeting card.

Creeping wintergreen is a dwarf shrub that draws itself up to its full height of four inches while moving outward, rooting as it goes. It is assertive in its growth, creating a great groundcover when given the right habitat. There are only two requirements for success in growing wintergreen. It must have somewhat acidic soil, and it does best when the stems have a loose mulch or duff for the roots as they extend their reach.

My soil was neutral to just slightly acidic, so I created a raised bed for my wintergreen along with other acid-loving plants. My garden is on the north side of a hill, and the bed I created was located under a white pine for shade. I used alternating layers of peat moss and pine bark chips to a depth of eight to twelve inches, let the bed get rained upon a couple of times, and then transplanted my wintergreen and companion woodland jewels.

Within weeks, the wintergreen settled in and began expanding, creating a carpet of deep, lustrous green leaves of heavy substance. Each leaf looked as though it had been polished during the night to shine in the light of a new day. In July, tiny white-aging-to-pink, urn-shaped flowers adorned the top of the leaves. As I walked by the bed I could watch the flowers drop and begin to turn into berries.

By October, each round berry had become a deep holiday-red. In November, the first frosts and light snows began to dust and adorn the red and green of the wintergreen, heralding the holidays to come.

Wintergreen responds well to containers if you would like to bring some up to your home's entrance over the holidays. Give it lots of light, water well, feed lightly and often, and it will quickly fill a container to match a red bow and some sprigs of pine or cedar.

My favorite companions are native azaleas of choice; further south, perhaps a camellia for the groundcover to ramble under. Coming up through the wintergreen, I think the native Iris verna, along with the pink ladyslipper and the painted trillium, flesh out blooms for spring.

Each time you walk by, pick a berry to chew on for the fresh clean taste of wintergreen that will linger along with memories of a bed filled with the near-perfect native plant.

Gene Bush owns Munchkin Nursery, a prime source of ornamental shade plants, including many natives, in southern Indiana. You can follow his blog and sign up for his newsletter, Green Clippin's, at www.munchkinnursery.com.

Welcome New INPAWS Members

CENTRAL

Barb Baker
D. Vaughn Bidwell
Katie Booth
Carole Boylan
Pam Burt
Cathlene Darragh
Michael E. Gill
Troy & Lauren Haffner
Jonathon Hensley
Judith Lawburg
Jody Nicholson
George M. Oliver
Jacqueline Rosales
Smita Skrivanek
Beth Young

NORTHEAST

Bill & Lynne Bogardus
Terry Chandler
M. Kate Ferguson
Ron Gamble

Heath Hurst & Mariah Russell
Al McSweeney
Brent Smith

SOUTH CENTRAL

Ann Burke
Paula & Barry Thomas

SOUTHWEST

Valerie Cockrum
Bonnie Frost

WEST CENTRAL

Deborah Marr

Letha's Legacy Continues

Cheryl Shearer, Youth Outreach

As a child, Letha Queisser developed a love for plants and flowers while she worked alongside her grandmother in her garden. When Letha was raising her three children and inspiring neighborhood youngsters to explore the fields and woods (and rewarding them with jellybeans) her husband Dave amusedly cheered her on.

Letha Queisser died in January 2007, and, in planning for her death, Letha requested memorial contributions be made to INPAWS. Under Tom Hohman and Ruth Ann Ingraham's leadership, the INPAWS Board established Letha's Youth Outdoors Fund as a part of the INPAWS youth outreach effort.

The purpose of Letha's Fund is to promote Letha Queisser's passion for wildflowers, Indiana native plants, and introducing children to the wonders of their outdoor world.

An early donor to the fund was Letha's high school friend, Carolyn Liebel, who fondly recalled times she and Letha spent

as young mothers with their children enjoying outdoor adventures. Letha's husband Dave, a considerate and thoughtful man, phoned everyone who made a gift to INPAWS (including Carolyn) to thank them for their contribution to Letha's Fund. A romance blossomed and they married in December 2007.

Dave continued his interest in Letha's Fund with Carolyn's full support. When Dave and Letha's son Kelly joined the INPAWS Youth Outreach committee, his presence gave Dave a ringside seat in the grant-making process. As Dave's health deteriorated, he made clear to Kelly that his support for Letha's Fund should continue after his passing.

When Dave died on September 14, 2011, Carolyn and the Queisser family again directed memorial gifts to Letha's Fund. The tributes to Dave through donations to the Fund have been significant and a great source of comfort for the family.

As Letha's sister Charlotte Price observes, "Letha and Dave were two people with a love and appreciation for the natural world and the joys it brings to us all."

The Queisser family legacy has continued with the donation of Letha's cherished botanic prints, native plant drawings that had been passed down through her family. Upon her death, Dave donated the remainder of the valuable drawings to INPAWS.

At this year's Annual Conference, outgoing president Tom Hohman became the first recipient of a framed print from Letha's collection—a drawing of a spring beauty—in appreciation for his dedicated leadership of INPAWS.

Through INPAWS and Letha's Fund, the Queisser family is carrying on a special legacy, with Indiana's children as beneficiaries.



You may donate to Letha's Youth Outdoors Fund by mailing a check to INPAWS Treasurer, P.O. Box 30317, Indianapolis, IN 46230-0317. Please write "Letha's Fund" in the memo line on the check.



At Letha's Fund's first-ever poster session at the Annual Conference, Jody Nicholson of Marian University EcoLab shares information on this popular field trip destination.



A Letha's Fund award recipient displayed photos of a butterfly garden they planted with the children.



Young men from Bloomington New Tech High School wowed the audience with their research on water quality for the Sycamore Land Trust. Photos above by Wendy Ford.



Ruth Ann Ingraham presented a framed print of Virginia spring beauty from Letha's collection to outgoing INPAWS president Tom Hohman. Photo by Cheryl Shearer.

Pollinators Plus

A Plea on Behalf of Plants and Insects

I have been fretting over an issue or two for a while now, and thank the voice of reason that is Doug Tallamy for stopping the spinning in my brain and turning me in the right direction. He even handed me the title!

Once upon a time we were part of a beautifully functioning system we call "nature."

All life on Earth depends on the same things to survive and reproduce: food, water, and air. Without them there is no reproduction.

What we, the human race, have done is to interrupt that life cycle in so many ways for so many forms of life that we are endangering our own lives. We are running ourselves and the rest of life into the ground.

We are using up or eliminating "resources" that were meant to be the infrastructure that would support life on this planet. I don't think these resources evolved as such, but it's the construct we have applied to them, and we need to gain a better understanding of the situation very quickly! For the sake of life's future, let's not take "nature" for granted.

So let me restart my story this way...

You love plants. So do I. If we didn't love plants, I wouldn't be writing this article, and you wouldn't be reading it.

Plants benefit us in untold ways, difficult to enumerate.

There are the obvious benefits: Plants make up a large part of our diet. They keep us alive. Some, more than we'll ever know, are medically beneficial. They heal us. Their flowers, leaves, branches and trunks beautify our world in every season with their structure and grace. Their aromas make us want to take deep breaths and "stand and stare." ("Leisure" by W. H. Davies, from *Songs of Joy and Others*)

Other benefits are less obvious: Better physical health through tending plants

(called gardening!). Better mental health through interaction with our green infrastructure. The gain of personal and scientific knowledge through observation of natural systems. Oh, and did I mention clean air to breathe? I could go on....

An aside: My personal quibble with the above is that these are all acts of "taking" instead of the "partaking" ("person who takes a part" —*Oxford Dictionary*) that once existed. They give, we take.

In our love of plants, throughout history and often unwittingly, the human race has done major damage.

We have introduced plant (and other) species all over the world which have turned out to be thugs.

Against such incursions, evolution fails over the short term. Evolution needs time. I know it will win out eventually, but in the meantime these thugs quickly take over vast areas from species that originated there.

The latter, so-called "native" plants, evolved over millennia along with the other life forms in those areas, and each form of life supported the other. We call this system a "community" and call many of its members "mutualists." When the thugs take over, the delicate "web of life" balance is thrown off, and the deadly chain of vulnerability to the community sets in. It's a form of terrorism that should be recognizable to the human race.

We humans have introduced foreign species of just about anything (animals, viruses, molds, insects, plants, to name a few) just about everywhere in the world. In so doing, we have disrupted the systems that took so long to evolve in those areas. In the world of plants, the system with which I am most familiar, the introduction of nonnative and invasive plants has reduced the diversity of the original plant material in what was once a well-balanced plant community, sometimes to the point of extirpation. This has caused the depletion

or extinction of the mutualist species that rely on those plants.

Among those foreign plant species we have introduced are the huge monocultures we grow for food. Orange groves in the desert, apple orchards worldwide, soy, and the most common crop on the planet, corn ("a human invention, a plant that does not exist naturally in the wild and can only survive if planted and protected by humans." —*History Detective*)—all of these, and more, take up land once inhabited by original plant communities. And many of these exotics require pollination by nonnative species of bees!

Through my love of plants, I am becoming more familiar with another component of our original communities—*insects*!

I spent last winter in Tucson working 12–16 hours a day at the computer assessing the tens of thousands of pictures Neil Diboll and I have taken for our forthcoming book, *The Gardener's Guide to Prairie Plants*, and doing the necessary research to prepare a comprehensive guide not only to the plants we work with but also to the insects that pollinate them or use them as host plants. Through this research I became acutely aware of the enormous debt of gratitude we owe these fellow creatures. And yet...

The instinctive human reaction to most insects is to find ever more efficient—and toxic—ways of ridding the planet of these "pests."

The average gardener or farmer panics at the sight of holes in the leaves of their treasured plants—and dear reader, I see you, in my overactive mind's eye, reaching for the spray can as well. I do feel a touch more empathy with the farmers doing the best they know how to feed a world population increasing exponentially (another issue needing to be addressed, but not here).

So now let me ask you: You love plants, don't you? Then you must love insects too, correct? Because without insects there

would be no plants, and without insects and plants there would be no us, right? And when you look at them closely, aren't many of them strangely beautiful?

Is that silence I hear? Hmm. Maybe the answer comes with qualifications such as: "Well, I like butterflies; they're pretty. And honeybees are useful (if nobody in our family is allergic). So I want to attract them to my garden. Along with the birds, of course. But the rest? Well, they're just pests aren't they?"

"Pests" indeed—without which the human race eventually dies!

Because the large majority of those insects are of mighty importance to life on this planet. Some few are just parasites, but that label applies equally to the human race.

Wasps or ants, beetles or bugs, moths or spiders have one of the matchless jobs in the world:

Insects are our pollinators—plus!

Without insects, many plants would simply not reproduce. (Notice I haven't even mentioned bees? That's for another article

too.) These pollinators are our food production managers. In some cases, such as ants, they are even farmers. They help produce our food. They also provide food for other species, including many species we humans count as food.

Some insects are generalists and will work with many species of plants. Some are specialists and will work with only one genus or even one species of plant. Many insects are mutualists, depending on other species within their community. They are all vulnerable to human activities.

Through loss of habitat and reduction of plant diversity due to those human activities, not to mention pesticides and the use of the spray can, we have already lost untold numbers of insect species forever. In the long term, we end up losing too if we don't change our behavior. We shoot ourselves in the foot, or worse. Fewer plants, fewer insects, less food production equals fewer people—not such a bad thing for the planet, perhaps, but unacceptable to us humans.

So far evolution appears to have coped with the burden of habitat degradation and loss of biodiversity. But can evolution keep up with human activity?

Insects are one unbelievably important component of our vulnerable native communities. I leave it to you to extrapolate to other introduced and invasive species, of which I have mentioned only a very few. We can only guess at the disruption and damage they have caused. And please include honeybees and earthworms in your considerations.

So there's the bad news, the knowledge I live with daily:

We are destroying our life-support system.

The good news? We can do something to at least ameliorate our impact. First read Doug Tallamy's book, *Bringing Nature Home*, then join your local native plant society. Buy and plant some of those plants that would have existed in plant communities in your area. If you don't have a garden of your own, join a (human) community garden and create an original plant community. Other members of the original community still in existence, including the insects, will follow as if by magic.

If you live in a city, find open spaces and turn them into wildlife habitat—they're doing this on roundabouts in the UK! Or grow plants in pots on your porch. Grow some of the edible native plants and reduce your dependence on monocultures of corn and soy, if only by a little. We have wild asparagus and Jerusalem artichokes in Indiana, to name just two, and they can both be easily grown in large pots.

And when holes appear in some of the leaves of your native plants—go and observe! Take a magnifying glass, find out what is eating them, look at the culprits closely, see how beautiful they are, learn what their true function is—if nothing else, we have Wiki to help us here—and admire their proficiency! Would that we performed our parts in "nature" half as well....

Find useful information on pollinators, biodiversity, plants, mutualists, generalists, local foods and such online.

Find out what's really happening out there, then go do something positive about it. Support your local native plant society. Educate your neighbors, your children, your grandchildren.

And if you don't use a computer, go to the library. Read... then act.

We have a big job ahead of us!



Look closely and you'll see a multitude of (native) mosquitoes working their way in and out of these common milkweed flowers. Photo by the author.

INVASIVES

Oriental Bittersweet

Ruth Ann Ingraham, Chair, Brown County Native Woodlands Project, Inc.

Anyone who drives through our southern states is stunned by mature trees, buildings, and even abandoned vehicles enveloped in the green cloak of kudzu. Kudzu is the classic example of a deliberately introduced, exotic plant whose original function was to control erosion along roadsides. This decision went awry with a disastrous results—the plant is out of control. Many of us are surprised when we learn that kudzu grows in Brown County as well as in many other counties in Indiana, and even into Michigan. The situation in Indiana is being closely monitored, and control efforts are ongoing.

The experience with kudzu illustrates what may happen when an exotic plant settles into a new environment without the natural controls that keep it in check in its homeland—Japan, in the case of kudzu.

One of Brown County's favorite fall plants is bittersweet, *Celastrus scandens*, with its clusters of bright orange orbs that dangle tantalizingly from vines that may reach the tops of tall trees. For as long as settlers have inhabited our county, as well as counties in 37 other states, bittersweet fruit, within reach, has been cut and used for decoration.

In the 1860s, a confusing look-alike was introduced as an ornamental plant—Asian or oriental bittersweet, *Celastrus orbiculatus*, native in Korea, China, and Japan. It escaped cultivation and naturalized, out-competing the species that has grown in North America historically.

Both vines are woody, perennial plants. Because they are similar in many ways, it is difficult for most of us to tell the native from the interloper, but there are distinct differences. The best way to determine whether you have the native or the non-native species is to check where the blossoms bloom and the fruit forms on the vine. American bittersweet produces flowers (and fruits) in single, terminal clusters at the tips of the stems. Oriental bittersweet is a prolific fruiter with lots and lots of fruit clusters emerging at many points along the stem.

Unlike American bittersweet, oriental bittersweet grows vigorously and climbs over and smothers vegetation, which may die from excessive shading or breakage. It can weaken mature trees by girdling the

trunk. Left unchecked, it forms an impenetrable thicket and becomes a pure stand in forests.

In Brown County, oriental bittersweet infests forest edges, woodlands, and fields, especially where land has been disturbed. While often found in more open, sunny sites, its tolerance for shade allows oriental bittersweet to invade forested areas. (Unfortunately, hybridization of the two occurs, making identification more difficult. Before using control methods, be cautious lest the native bittersweet become the target.)

Many of us buy wreaths and other fall decorations that include sprigs of bittersweet berries. If, at the end of the season, you plan to discard the berries, and if you question whether the fruit is from the invasive rather than the native variety, discard them with your trash in a plastic bag. Putting the seeds or branches of oriental bittersweet in a compost or brush pile could accidentally introduce an invasive species to your property.

To learn more about this and other exotic, invasive plants, visit www.inpaws.org or find excellent links to more information at the website of the Brown County Native Woodlands Project, <http://bcnwp.org>.

Reprinted from the BCNWP Newsletter, October 2011.

Ruth Ann Ingraham, our INPAWS historian, wears many hats. On weekends in Brown County, she volunteers helping landowners locate and identify invasive plants growing on their properties. You also know her as the author of *Swimming with Frogs* (Bloomington: Indiana University Press, 2004), a journal of experiences with nature at her Brown County cabin.



Clusters of fruits all along the branch are the giveaway that this is the invasive oriental bittersweet. Drawing courtesy Florida Center for Instructional Technology.

THE NEXT GENERATION

INPAWS Invites School Participation

Many may not be aware that in 2007 INPAWS Council established a membership category for school nature/ecology clubs with an interest in native plants. Annual dues are \$25.

INPAWS Journal and all other mailings will be sent to the teacher or leader of the group, who will disseminate the information to club members. It is our understanding that, if the club is school-sponsored, the school will reimburse the teacher for the dues.

Members of the school group will be able to attend INPAWS events such as plantings, invasives pulls, field trips, and volunteer activities. In cases where there is limited space (such as hikes with restricted number of participants), arrange-

ments will need to be made in advance with the event leader.

Slide programs and other information will be made available to the groups, and they will receive special consideration regarding grants for native plantings on their school property.

If any of our members are now working with a school group, please advise them of this policy and contact youth@inpaws.org for further information.

FIELD NOTES

INPAWS Mourns Bill Brink

INPAWS lost founding member D. William Brink suddenly and unexpectedly on November 15.

Bill operated Great Outdoors TurfScapes, a highly respected, environmentally conscientious turf management company on the north side of Indianapolis.

An avid outdoorsman and naturalist, Bill was an accomplished, self-taught wildlife photographer whose work exhibited great sensitivity and attention to detail. He knew exactly when and where wild things could be found and possessed the patience and skill to get the perfect shot. He was a founder of and exhibitor in the annual Eagle Creek Park Images of Nature Exhibit.

Many in INPAWS knew Bill as a good friend. Ruth Ann Ingraham recalls him driving her to an early organizational meeting in his truck during a blinding Indianapolis snowstorm. Bill also contributed seed money to get INPAWS started and served as one of its first officers.

Bill was active in the Indiana Audubon Society and a volunteer for Holliday Park and Eagle Creek Park, where he led Sunday morning bird hikes for many years.

Adapted from the The Indianapolis Star obituary, published November 18, 2011. Memorial contributions may be made to Eagle Creek Park, Friends of Holliday Park, or Letha's Youth Outdoors Fund (c/o INPAWS, P.O. Box 30317, Indianapolis, 46230).



Here's a peek at what's in store: spring wildflowers at Fort Harrison State Park (Marion County) led by Perry Scott; forest wildflowers of Kokiwanee Preserve (Wabash County) led by David Hicks; sandstone cliff plants at Hemlock Cliffs (Crawford County) led by Kirk Larson; dune plants of Indiana Dunes National Lakeshore (Porter County) led by Noel Pavlovic; fungi of Shades State Park (Montgomery County) led by Andy Methven; shrubs of West Central Indiana (natural area TBA) led by Sally Weeks.

Watch for dates and details in the blog at INPAWS.org.

Revamped Website Unveiled in November

INPAWS' website has been reorganized, the logo "refreshed," and bells and whistles added to bring us current with social networking technology.

The website team chaired by Ruth Ann Ingraham includes INPAWS members Amy Perry, Jeff Pitts, Wendy Ford, and Matt Newell. The team brainstormed a new organization, and Wendy Ford collected existing pieces, wrote additional content, and populated the new site with text and photos. A project manager, graphic designer, and programmer associated with Ratio Architects worked with the team (at a reduced fee) to bring their vision to fruition.

The new site features a blog, which is where you'll find the latest news on INPAWS events. Blog pages will bring you timely news, in contrast to the content pages which house more "permanent" information on native plants, where to visit Indiana natives, how to landscape with them, and how to inspire the next generation of stewards of the environment.

The site retains the valuable species pages prepared by Marcia Moore, which show pictures of and link to information about all the Indiana native plants featured in our brochure, *Landscaping with Plants Native to Indiana*.

Please explore the INPAWS website at www.inpaws.org and let us know how we can make it even more useful to you.

Coming Up

January 24

Conservation Day at the Statehouse, Indiana Statehouse North Atrium, Indianapolis, 10:00 a.m. to 1:30 p.m.

May 12

INPAWS Plant Sale & Auction, Park Tudor School, Indianapolis

Watch for announcements of INPAWS events and field trips in the mail, via email, and in the blog at INPAWS.org.

Members Promote Natives

INPAWS members Alicia Douglass and Paul Rothrock have been authoring a column entitled "Native Plants to Know and Grow" for *Indiana Gardener* magazine (www.indianagardener.com).

The free monthly to bi-monthly publication has a northern Indiana circulation. This year they highlighted alumroot, bluestem goldenrod, columbine, heuchera, partridge pea, witch hazel, and prairie restoration plants.

"The column has been an opportunity to link the readers to INPAWS and its website resources," Rothrock says.

Friesner Herbarium Launches Blog

An exciting new blog offers seasonal observations of wild plants in Central Indiana—what's in bloom and tips on identification. It's written by our own Becky Dolan, director of the Friesner Herbarium at Butler University for over 20 years. She has a PhD in Botany from the University of Georgia and is a past president of INPAWS.

Find Becky's blog at <http://blogs.butler.edu/indianaplants/>.

Hike with INPAWS This Year

Program chair Mike Homoya has a fine lineup of excursions planned for this hiking season.



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CONSERVATION BEAT

INCA 2011 Legislative Scorecard

Jane & David Savage, Conservation Committee

Here's how last year's priorities of the Indiana Conservation Alliance fared in the Indiana legislature. (The "grades" assigned are not INCA's but our loose interpretation of the results.)

Watch for information on 2012 priorities on the INPAWS blog, and plan on participating in Conservation Day at the Statehouse, a unique opportunity to make your voice for conservation heard.

Conservation Day will be held January 24, 10:00 a.m. to 1:30 p.m. in the North Atrium of the Indiana Statehouse.

C

Indiana Heritage Trust (IHT) Funding Legislators allocated \$100,000 per year from the general fund for the IHT. The Alliance had requested \$750,000 per year in general fund appropriations in the bill.

A+

Clean Water Indiana (CWI) Funding The budget allocates \$500,000/year from the general fund for the CWI as well as all of the cigarette tax dedicated funding. This is exactly what the Alliance was advocating for. Success!

D

Restricting Phosphorous in Lawn Fertilizers House Bill 1425 was not scheduled for a committee hearing. The language was not inserted into another bill.

A

Sustainable Natural Resources Task Force Senate Bill 375 establishing a task force to assess programmatic and funding needs of natural resources passed! Success!

C-

Property-Assessed Clean Energy Bonds (PACE) Senate Bill 260/House Bill 1457 would authorize municipalities to establish clean energy financing districts with private funding. In its first session in the legislature, PACE legislation drew Republican authors in both chambers, and was heard in committee in both chambers, but the Indiana General Assembly failed to adopt this PACE legislation. In response to opposition from the Indiana Bankers Association, and from legislators who were reluctant to give municipalities added bonding authority, the Senate amended SB 260 to enable local governments to adopt privately funded PACE programs, and eliminated the priority of a PACE lien. In the House, the same concerns resulted in HB 1457 program language being deleted and instead provided for a summer study committee review of PACE programs. Ultimately, neither bill was acted on by the second chamber, and the bills died. PACE advocates will request that the topic be studied by the Environmental Quality Service Council prior to the 2012 session.